

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS

Transnet National Ports Authority

an Operating Division **TRANSNET SOC LTD**

[Registration Number 1990/000900/30]

REQUEST FOR PROPOSAL (RFP)

DESCRIPTION OF THE WORKS: REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS

RFP NUMBER : TNPA/2024/08/0003/73199/RFP

ISSUE DATE : 16 SEPTEMBER 2025

COMPULSORY CLARIFICATION : 30 SEPTEMBER 2025

CLOSING DATE : 17 OCTOBER 2025

CLOSING TIME : 16h00

TENDER VALIDITY PERIOD : 12 WEEKS FROM CLOSING DATE

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Number	Heading
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- | | |
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T1.1

Tender Notice and Invitation to Tender

T1.1 TENDER NOTICE AND INVITATION TO TENDER

SECTION 1: NOTICE TO TENDERERS

1. INVITATION TO TENDER

Responses to this Tender [hereinafter referred to as a **Tender**] are requested from persons, companies, close corporations or enterprises [hereinafter referred to as a Tenderer].

DESCRIPTION	REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS
TENDER DOWNLOADING	This Tender may be downloaded directly from these website: ALL FREE OF CHARGE 1. National Treasury eTender Publication Portal at www.etenders.gov.za and the 2. Transnet website at https://transnetetenders.azurewebsites.net (please use Google Chrome to access Transnet link) 3. CIDB website notice https://www.cidb.org.za/cidb-tenders/currenttenders/

COMPULSORY TENDER CLARIFICATION MEETING	A Compulsory Tender Clarification Meeting will be conducted at the Training Centre, Ground floor, South Arm Road, Port of Cape Town on the 30 September 2025, at 10:00am for a period of ± 2 (two) hours. The Compulsory Tender Clarification Meeting will start punctually, and information will not be repeated for the benefit of Tenderers arriving late. A Site visit/walk will take place, tenderers are to note: • Tenderers to provide own transportation and accommodation (if required). • Tenderers are required to wear safety shoes, goggles, long sleeve shirts, high visibility vests and hard hats. • Tenderers without the recommended PPE will not be allowed on the site walk. • Tenderers and their employees, visitors, clients and customers entering Transnet Offices, Depots, Workshops and Stores will have to undergo breathalyser testing. • All forms of firearms are prohibited on Transnet properties and premises. The relevant persons attending the meeting must ensure that their identity documents, passports or drivers licences are in their possession for inspection at the access control gates.
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	The Certificate of Attendance in the form set out in the Returnable Schedule T2.2-01 hereto must be completed and submitted with your Tender as proof of attendance is required for the compulsory site meeting. Tenderers are required to bring this Returnable Schedule T2.2-01 to the Compulsory Tender Clarification Meeting to be signed by the <i>Employer's</i> Representative or assigned nominee. Tenderers failing to attend the compulsory tender briefing will be disqualified.
CLOSING DATE & TIME	16:00 on (17 OCTOBER 2025) Tenderers must ensure that tenders are uploaded timeously onto the system. If a tender is late, it will not be accepted for consideration.

2. TENDER SUBMISSION

Transnet has implemented a new electronic tender submission system, the e-Tender Submission Portal, in line with the overall Transnet digitalization strategy where suppliers can view advertised tenders, register their information, log their intent to respond to bids and upload their bid proposals/responses on to the system.

a) The Transnet e-Tender Submission Portal can be accessed as follows:

Log on to the Transnet eTenders management platform website (<https://transnetetenders.azurewebsites.net>);

- Click on "ADVERTISED TENDERS" to view advertised tenders;
- Click on "SIGN IN/REGISTER – for bidder to register their information (must fill in all mandatory information);
- Click on "SIGN IN/REGISTER" - to sign in if already registered;
- Toggle (click to switch) the "Log an Intent" button to submit a bid;
- Submit bid documents by uploading them into the system against each tender selected.
- **Tenderers are required to ensure that electronic bid submissions are done at least a day before the closing date to prevent issues which they may encounter due to their internet speed, bandwidth or the size of the number of uploads they are submitting. Transnet will not be held liable for any challenges experienced by bidders as a result of the technical challenges. Please do not wait for the last hour to submit. A Tenderer can upload 30mb per upload and multiple uploads are permitted.**

- b) The tender offers to this tender will be opened as soon as possible after the closing date and time. Transnet shall not, at the opening of tenders, disclose to any other company any confidential details pertaining to the Tender Offers / information received, i.e. pricing, delivery, etc. The names and locations of the Tenderers will be divulged to other Tenderers upon request.
- c) Submissions must not contain documents relating to any Tender other than that shown on the submission.

3. CONFIDENTIALITY

All information related to this RFP is to be treated with strict confidentiality. In this regard Tenderers are required to certify that they have acquainted themselves with the Non-Disclosure Agreement. All information related to a subsequent contract, both during and after completion thereof, will be treated with strict confidence. Should the need however arise to divulge any information gleaned from provision of the Works, which is either directly or indirectly related to Transnet's business, written approval to divulge such information must be obtained from Transnet.

4. DISCLAIMERS

Tenderers are hereby advised that Transnet is not committed to any course of action as a result of its issuance of this Tender and/or its receipt of a tender offer. In particular, please note that Transnet reserves the right to:

- 4.1. Award the business to the highest scoring Tenderer/s unless objective criteria justify the award to another tenderer.
- 4.2. Not necessarily accept the lowest priced tender or an alternative Tender;
- 4.3. Go to the open market if the quoted rates (for award of work) are deemed unreasonable;
- 4.4. Should the Tenderers be awarded business on strength of information furnished by the Tenderer, which after conclusion of the contract is proved to have been incorrect, Transnet reserves the right to terminate the contract;
- 4.5. Request audited financial statements or other documentation for the purposes of a due diligence exercise;
- 4.6. Not accept any changes or purported changes by the Tenderer to the tender rates after the closing date;

- 4.7. Verify any information supplied by a Tenderer by submitting a tender, the Tenderer/s hereby irrevocably grant the necessary consent to the Transnet to do so;
- 4.8. Conduct the evaluation process in parallel. The evaluation of Tenderers at any given stage must therefore not be interpreted to mean that Tenderers have necessarily passed any previous stage(s);
- 4.9. Unless otherwise expressly stated, each tender lodged in response to the invitation to tender shall be deemed to be an offer by the Tenderer. The Employer has the right in its sole and unfettered discretion not to accept any offer.
- 4.10. Not be held liable if tenderers do not provide the correct contact details during the clarification session and do not receive the latest information regarding this RFP with the possible consequence of being disadvantaged or disqualified as a result thereof.
- 4.11. Transnet reserves the right to exclude any Tenderers from the tender process who has been convicted of a serious breach of law during the preceding 5 [five] years including but not limited to breaches of the Competition Act 89 of 1998, as amended. Tenderers are required to indicate in tender returnable [clause 12 on T2.2-21], **[Breach of Law]** whether or not they have been found guilty of a serious breach of law during the past 5 [five] years.
- 4.12. Transnet reserves the right to perform a risk analysis on the preferred tenderer to ascertain if any of the following might present an unacceptable commercial risk to the employer:
 - *unduly high or unduly low tendered rates or amounts in the tender offer;*
 - *contract data of contract provided by the tenderer; or*
 - *the contents of the tender returnables which are to be included in the contract.*

5. Transnet will not reimburse any Tenderer for any preparatory costs or other work performed in connection with this Tender, whether or not the Tenderer is awarded a contract.

6. NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE

Tenderer are required to self-register on National Treasury's Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. The CSD can be accessed at <https://secure.csd.gov.za/>. Tenderer are required to provide the following to Transnet in order to enable it to verify information on the CSD:

Supplier Number..... and Unique registration reference
number.....(**Tender Data**)

**Transnet urges its clients, suppliers and the general public
to report any fraud or corruption to
TIP-OFFS ANONYMOUS: 0800 003 056 OR Transnet@tip-offs.com**

"HOW TO" GUIDE FOR BIDDERS

REGISTER ON ETENDER PORTAL

ACCESS TENDERS

NB: Do not wait for the last minute to register or to bid for a tender. Ensure you complete your process at least 1 day (24hours) before the closing date

Go to Google Chrome 

In the address bar type: <https://transnetetenders.azurewebsites.net>



https://transnetetender.b2clogin.com/transnetetender.onmicrosoft.com/b2c_1_signupsignin/oauth2/v2.0/authorize?client



Sign in with your email address

Email Address

Password

[Forgot your password?](#)

Sign in

Don't have an account? [Sign up now](#)

If not already registered, click on Sign up now.

Ensure that the email you use to sign in is the same as the email that you received from the tender invite on the email, otherwise you will not see the tender

[← Cancel](#)



[Send verification code](#)

Country/Region



[Create](#)

Complete all fields, before selecting “Send verification code” and confirm that all information is correct.

VERY IMPORTANT: Each field needs to be completed and not to be left blank

If you do not have a central Supplier Database number, enter the same company registration number in that field.

Send verification code

After completing all fields, select "Send verification code". The code will be sent to your email.

< Cancel



Verification code has been sent to your inbox. Please copy it to the input box below.

abc@gmail.com

Verification Code

Copy the code as received on the email and paste it in the Verification code field
Then click on Verify code

Verify code

Send new code

Forgot your password?

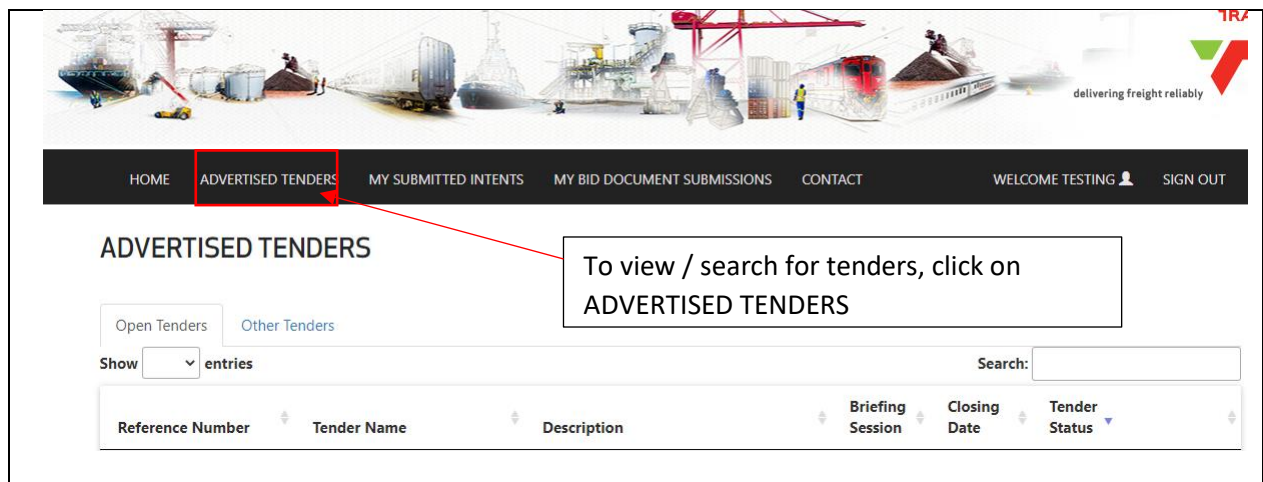
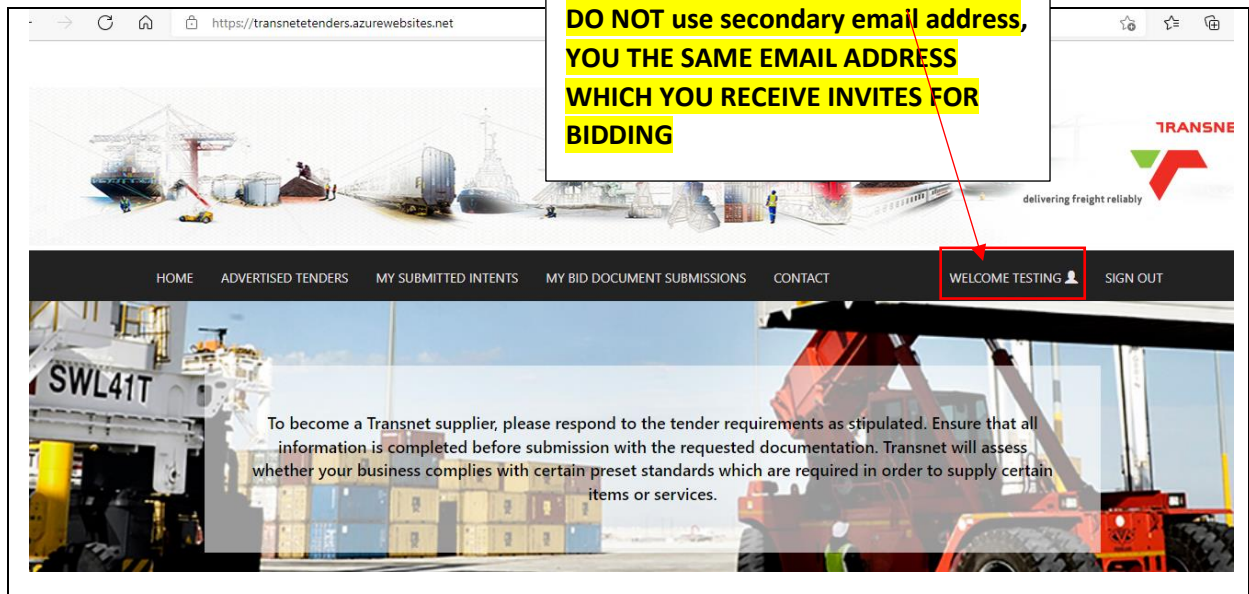
Sign in

Don't have an account? [Sign up now](#)

Then click on Sign in

Once registered and signed in, the home screen will have “WELCOME (Registered user)”

DO NOT use secondary email address, YOU THE SAME EMAIL ADDRESS WHICH YOU RECEIVE INVITES FOR BIDDING



To view / search for tenders, click on ADVERTISED TENDERS

Tender Invitation For Tender Ref # TE/2022/04/0697/RFQ - Message (HTML)

File Message Help Tell me what you want to do

Delete Archive Reply Reply All Forward Share to Teams ATM signed To Manager Team Email Move Tags Editing Read Aloud Translate Zoom Send to OneNote Viva Insights

Tender Invitation For Tender Ref # TE/2022/04/0697/RFQ

SRV-TCC-Etender
To noreply@transnet.net

This message was sent with Low importance.

Dear Suppliers,
You have been invited to bid and respond to the following tender:

Name Of Tender : TE22-SRX-1FG-02068
Description : STOP; TOP BUNK, OD 19.5 X HT 6.5 MM
Tender Number : TE/2022/04/0697/RFQ

Access to this tender will be granted by using this email when you sign up/sign in. To access the tender information

Kind Regards,
Transnet eTenders

When a bidder receives an email to quote, the bidder needs to register with the email address of the recipient that received the email. If already registered, sign in.

NOTE: The details on this email is intended for guidance only and not to be used on the live system

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

ADVERTISED TENDERS

Open Tenders Other Tenders

Show entries Search:

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TCC/2021/11/0031/RFQ	For the supply and installation of an air compressor	For the supply and installation of an air compressor for indoor shooting range that operates the laser system and supply air to air guns utilised during training and conduct maintenance on air supply system and hoses.		12/10/2021 12:00:00 PM	Closed	View Details
TFR/2021/12/0014/RFQ	ELECTRICAL MATERIAL (CABLES)	SUPPLY AND DELIVERY OF ELECTRICAL MATERIAL (CABLES) FOR A ONCE OFF PERIOD		12/13/2021 4:00:00 PM	Closed	View Details
TFR/2021/12/0017/RFQ	CRAC_JHB_36509.	FOR THE SUPPLY AND DELIVERY OF HIGH BACK CHAIRS FOR CTC OFFICES IN CENTRAL, EASTERN AND WESTERN REGIONS, FOR A ONCE OFF PERIOD.		12/14/2021 10:00:00 AM	Closed	View Details
TFR/2021/12/0015/RFQ	CRAC-JHB-36313	FOR THE SUPPLY AND DELIVERY OF VARIOUS CLAMPS, TERMINAL LUGS, DROPPER CLIPS AND		1/13/2022 12:00:00	Closed	View Details

When signed in, select "ADVERTISED TENDERS".

To manually search and change the view from Closed to Open, click twice on arrow next to "Tender Status". The arrow pointing down will change to blue and open tenders will be displayed.

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ADVERTISED TENDERS
MY SUBMITTED INTENTS
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ADVERTISED TENDERS

Open Tenders
Other Tenders

Show
▼
entries
Search:

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TE/2022/04/0450/RFQ	VALVE:L-1 LOAD DET,WAGONS AIRBRAKE	VALVE:L-1 LOAD DET,WAGONS AIRBRAKE-062101802 VALVE; TYPE: L-1 LOAD DETECTOR, MEDIA FOR WHICH DESIGNED: WAGONS AIRBRAKE, CONNECTION TYPE: FLANGE, SPECIAL FEATURES: BLUE, WITHOUT PIPE BRACKET; SIMILAR ITEM: 062004338		4/8/2022 10:00:00 AM	Open	View Details
TE/2022/04/0494/RFQ	GEAR OIL	OIL, GEAR TYPE SYNTHETIC BRAND NAME MOBILGEAR SHC SERIES GRADE SCH 6800 VISCOSITY RATING 220 TO 320 FLASH POINT 234 DEG C COLOR ORANGE CONTAINER TYPE SACHET 250 G CONTAINER CAPACITY 14 KG FOR USE ON: 39-200 GM, 15E AND 19E LOCOMOTIVES		4/8/2022 10:00:00 AM	Open	View Details
TE/2022/04/0495/RFQ	SUPPLY OF CORROSION (NALCOOL) - APPROVED	ITEM NUMBER - 077807563 INHIBITOR, CORROSION; TYPE: COOL-C18, COLOR: RED,		4/8/2022 10:00:00	Open	View Details

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ADVERTISED TENDERS

Open Tenders
Other Tenders

Show
▼
entries
Search: TE/2022/04/0697/RFQ

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM		4/13/2022 10:00:00 AM	Open	View Details

To search for a specific tender, the tender number, tender name or description can be used for searching.

ADVERTISED TENDERS

Open Tenders
Other Tenders

Show
▼
entries
Search: TE22-SRX-1FG-02068

Reference Number	Tender Name	Description	Briefing Session	Closing Date	Tender Status	
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM		4/13/2022 10:00:00	Open	View Details

When the tender has been identified, click on "View Details"

When the “View Details” has been selected, the following screen will be displayed where the attachments can be viewed or downloaded.

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

TENDER DETAILS

Tender Details

Tender Reference Number	TE/2022/04/0697/RFQ
Name Of Tender	TE22-SRX-1FG-02068
Description	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM
Tender Type	RFQ
Contact Person	Charl du Preez Transnet Engineering SLR
Contact Person Email Address	Charl.duPreez@transnet.net
Date Published	4/7/2022 3:51:47 PM
Closing Date	4/13/2022 10:00:00 AM
Briefing Date And Time	
Briefing Details	
Location Of Service	Coaches, Salt River

Briefing Session
Closing Date
4/13/2022 10:00:00 AM
Attachments

2.14 Standard Terms and Conditions of Contract f

2.18 Supplier Integrity Pact_April 2020_v1.pdf

2.19 Non Disclosure Agreement_April 2020_v1.pdf

2.9 Request for Quotations TE22-SRX-1FG-02068,

Log An Intent To Bid
☐

If interested to bid, on the same page there's an option to select: **Log an Intent to Bid**. Once selected, an option will appear to “**Submit Intent**” or “**Cancel**”. Click on **Submit Intent**

Tender Details

Tender Reference Number	TE/2022/04/0697/RFQ
Name Of Tender	TE22-SRX-1FG-02068
Description	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM
Tender Type	RFQ
Contact Person	Charl du Preez Transnet Engineering SLR
Contact Person Email Address	Charl.duPreez@transnet.net
Date Published	4/7/2022 3:51:47 PM
Closing Date	4/13/2022 10:00:00 AM
Briefing Date And Time	
Briefing Details	
Location Of Service	Coaches, Salt River
Name Of Institution	TE
Tender Category	Goods
Tender Status	Open

Briefing Session
Closing Date
4/13/2022 10:00:00 AM
Attachments

2.14 Standard Terms and Conditions of Contract f

2.18 Supplier Integrity Pact_April 2020_v1.pdf

2.19 Non Disclosure Agreement_April 2020_v1.pdf

2.9 Request for Quotations TE22-SRX-1FG-02068,

Log An Intent To Bid
☒

Tender Details

Tender Reference Number

Name Of Tender

Description

Tender Type RFQ

Contact Person Charl du Preez Transnet Engineering SLR

Contact Person Email Address Charl.duPreez@transnet.net

Date Published 4/7/2022 3:51:47 PM

Closing Date 4/13/2022 10:00:00 AM

Briefing Date And Time

Briefing Details

Location Of Service

Name Of Institution

Tender Category

Tender Status

Intent to Bid

Your request to log an intent to bid has been successfully submitted.

Close

When the "Submit Intent" is selected, a message will appear to indicate that the request was successfully submitted. Click on close and wait for the next screen.

Briefing Session

Closing Date 4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract for
- 2.18 Supplier Integrity Pact_April 2020_v1.pdf
- 2.19 Non Disclosure Agreement_April 2020_v1.pdf
- 2.9 Request for Quotations TE22-SRX-1FG-02068.pdf

Log An Intent To Bid

☒

[Submit Intent](#) [Cancel](#)



delivering freight reliably

HOME
ADVERTISED TENDERS
MY SUBMITTED INTENTS
MY BID DOCUMENT SUBMISSIONS
CONTACT
WELCOME TESTING 
SIGN OUT

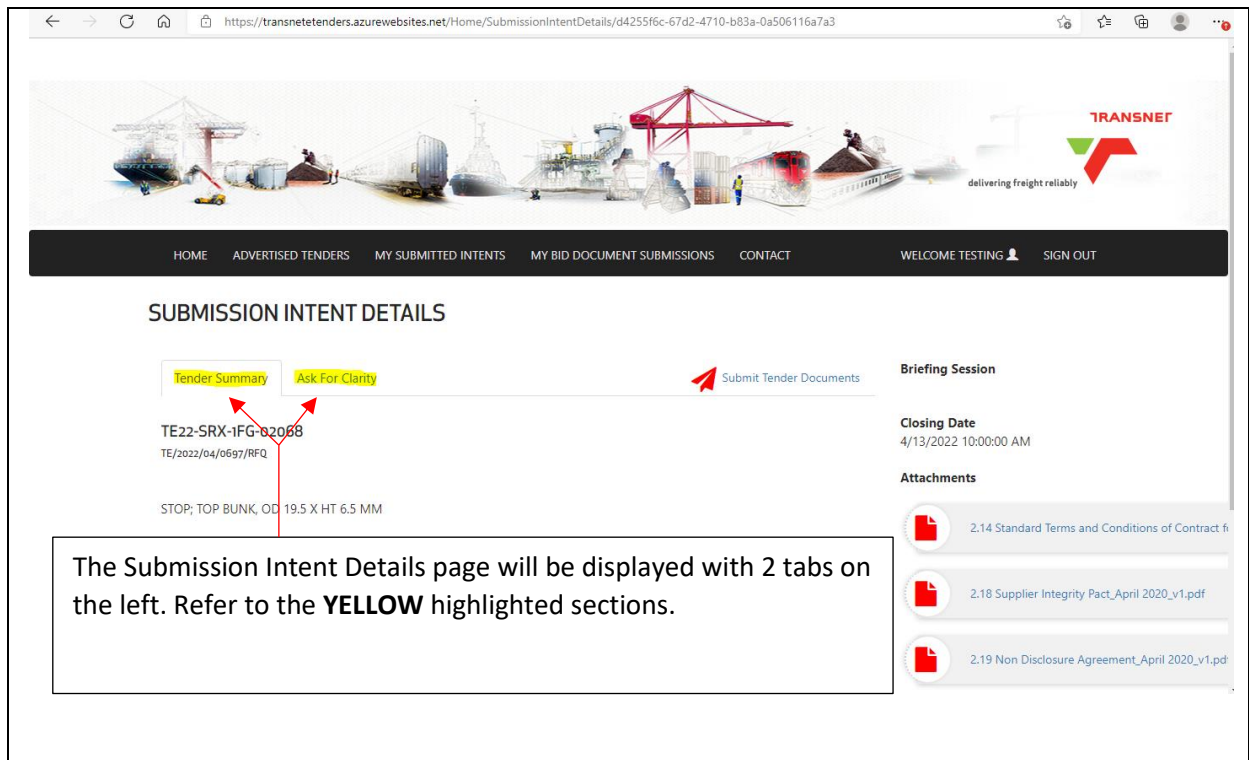
MY SUBMISSION INTENTS

Show entries

Tender Reference Number	Name	Description Of Tender	Briefing Session Date	Closing Date	View Details
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	STOP; TOP BUNK, OD 19.5 X HT 6.5 MM		4/13/2022 10:00:00 AM	View Details

Showing 1 to 1 of 1 entries

The screen should be updated and load the "MY SUBMITTED INTENTS". To proceed to capturing your bid documents, click on "View Details"



https://transnettenders.azurewebsites.net/Home/SubmissionIntentDetails/d4255f6c-67d2-4710-b83a-0a506116a7a3

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

SUBMISSION INTENT DETAILS

Tender Summary **Ask For Clarity** [Submit Tender Documents](#)

TE22-SRX-1FG-02068
TE/2022/04/0697/RFQ

STOP, TOP BUNK, OD 19.5 X HT 6.5 MM

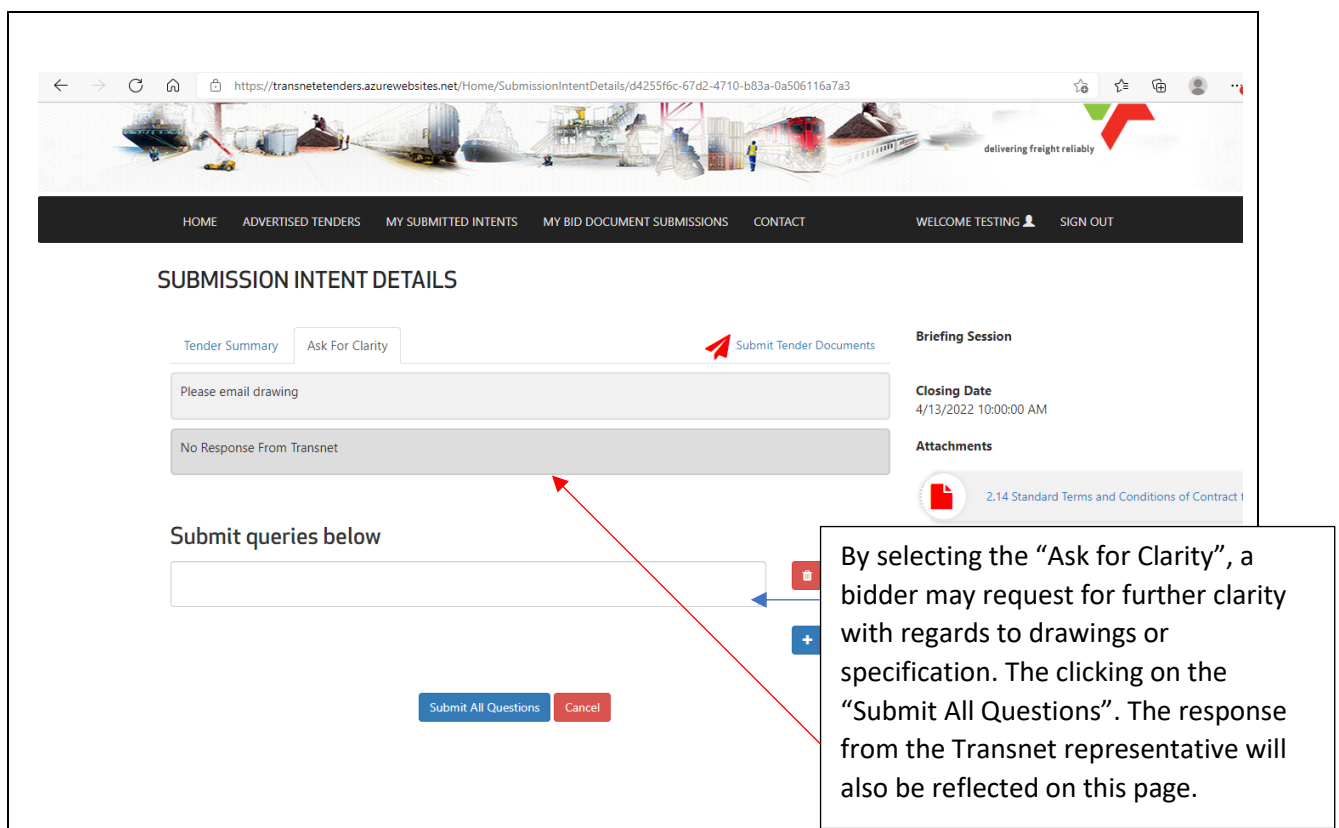
Briefing Session

Closing Date
4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract fi
- 2.18 Supplier Integrity Pact_April 2020_v1.pdf
- 2.19 Non Disclosure Agreement_April 2020_v1.pdf

The Submission Intent Details page will be displayed with 2 tabs on the left. Refer to the **YELLOW** highlighted sections.



https://transnettenders.azurewebsites.net/Home/SubmissionIntentDetails/d4255f6c-67d2-4710-b83a-0a506116a7a3

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS MY BID DOCUMENT SUBMISSIONS CONTACT WELCOME TESTING SIGN OUT

SUBMISSION INTENT DETAILS

Tender Summary **Ask For Clarity** [Submit Tender Documents](#)

Please email drawing

No Response From Transnet

Submit queries below

[Submit All Questions](#) [Cancel](#)

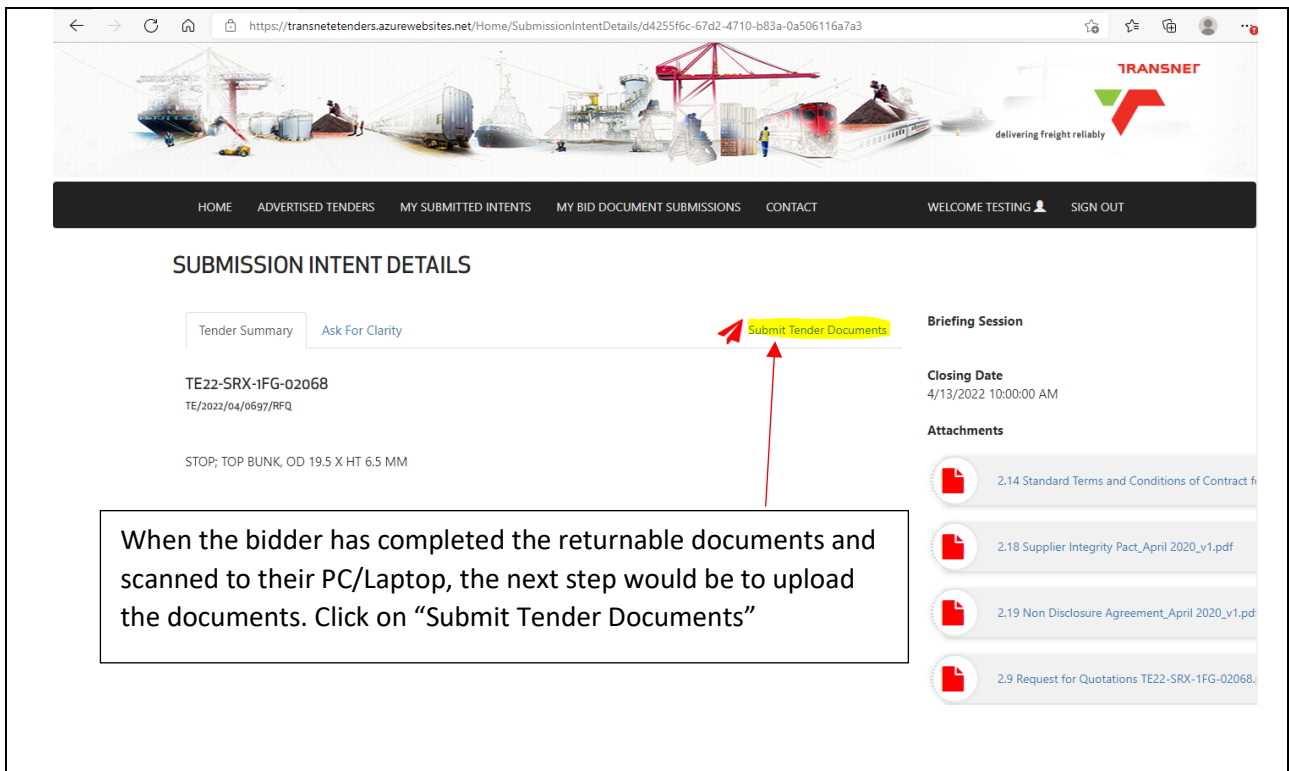
Briefing Session

Closing Date
4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract 1

By selecting the "Ask for Clarity", a bidder may request for further clarity with regards to drawings or specification. The clicking on the "Submit All Questions". The response from the Transnet representative will also be reflected on this page.



Submission Intent Details

Tender Summary Ask For Clarity **Submit Tender Documents**

TE22-SRX-1FG-02068
TE/2022/04/0697/RFQ

STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

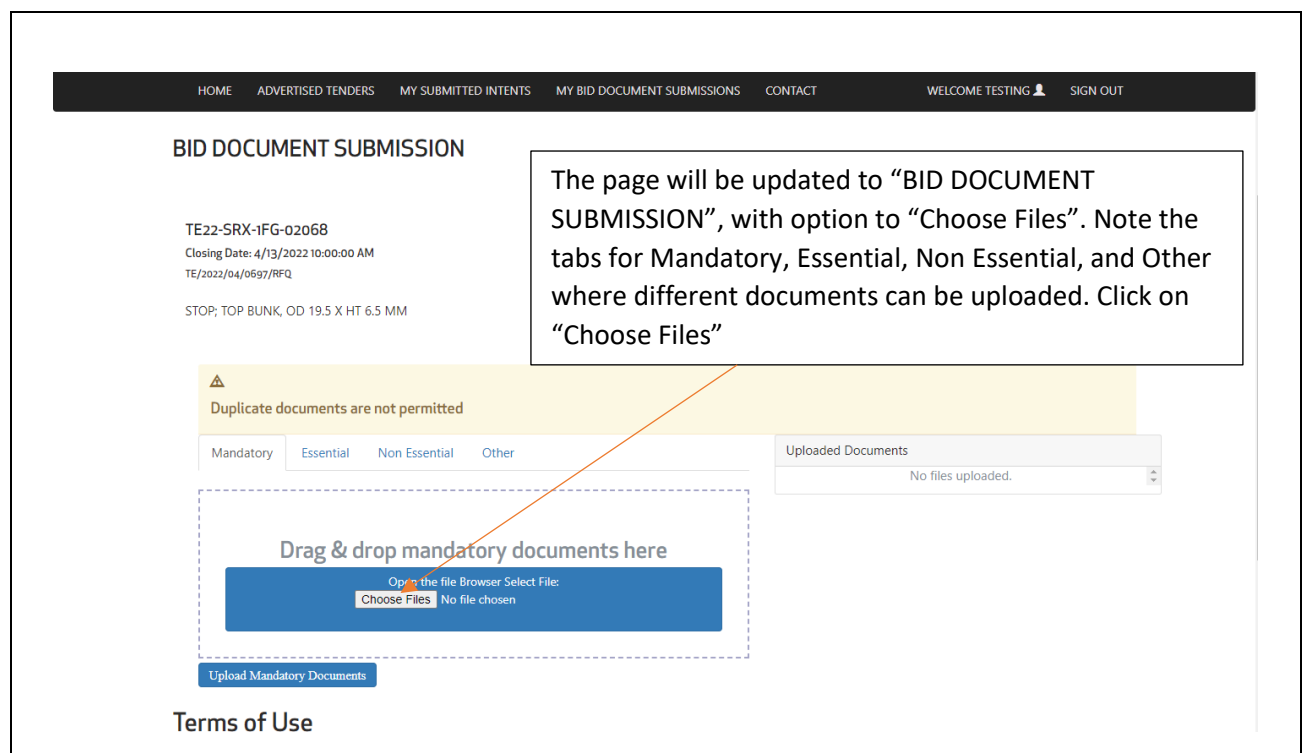
When the bidder has completed the returnable documents and scanned to their PC/Laptop, the next step would be to upload the documents. Click on “Submit Tender Documents”

Briefing Session

Closing Date
4/13/2022 10:00:00 AM

Attachments

- 2.14 Standard Terms and Conditions of Contract f
- 2.18 Supplier Integrity Pact_April 2020_v1.pdf
- 2.19 Non Disclosure Agreement_April 2020_v1.pdf
- 2.9 Request for Quotations TE22-SRX-1FG-02068.



BID DOCUMENT SUBMISSION

TE22-SRX-1FG-02068
Closing Date: 4/13/2022 10:00:00 AM
TE/2022/04/0697/RFQ

STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

The page will be updated to “BID DOCUMENT SUBMISSION”, with option to “Choose Files”. Note the tabs for Mandatory, Essential, Non Essential, and Other where different documents can be uploaded. Click on “Choose Files”

Duplicate documents are not permitted

Mandatory Essential Non Essential Other

Uploaded Documents
No files uploaded.

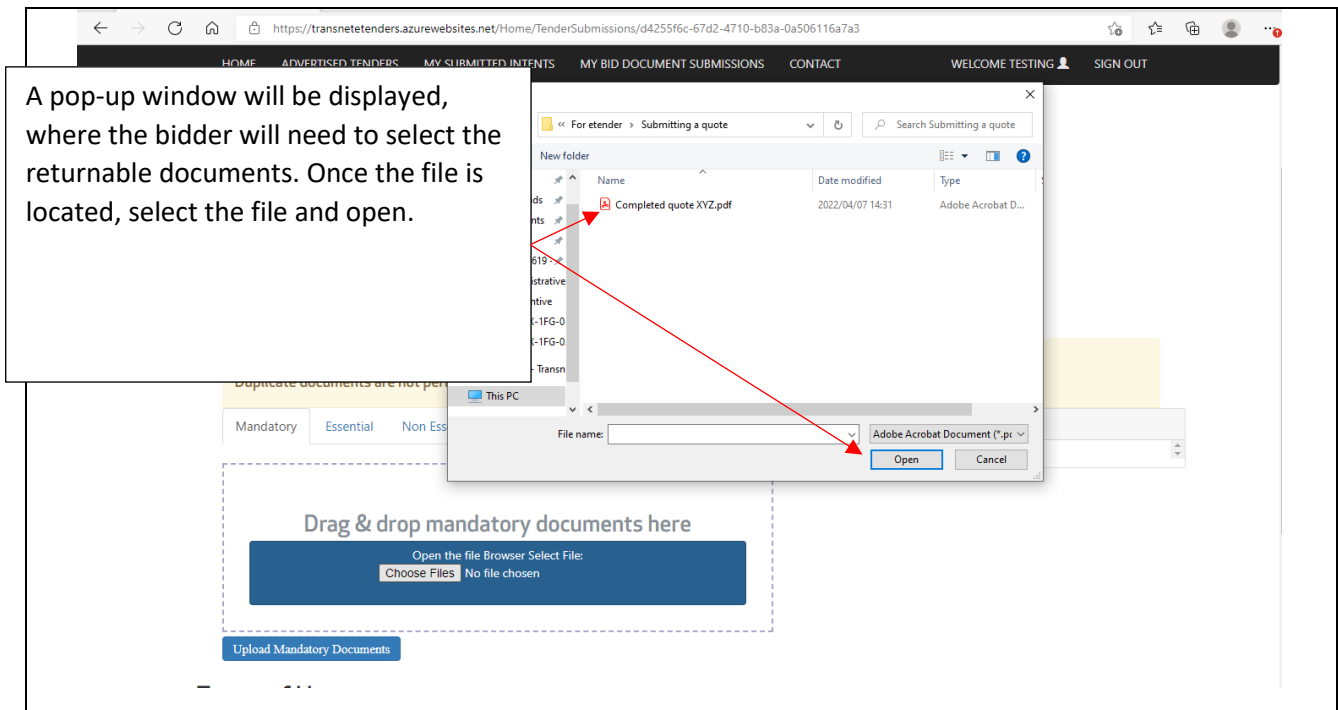
Drag & drop mandatory documents here

Open the file Browser Select File:
Choose Files No file chosen

Upload Mandatory Documents

Terms of Use

A pop-up window will be displayed, where the bidder will need to select the returnable documents. Once the file is located, select the file and open.



BID DOCUMENT SUBMISSION

TE22-SRX-IFG-02068
Closing Date: 4/13/2022 10:00:00 AM
TE/2022/04/0697/RFQ
STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

Duplicate documents are not permitted

Mandatory Essential Non Essential Other

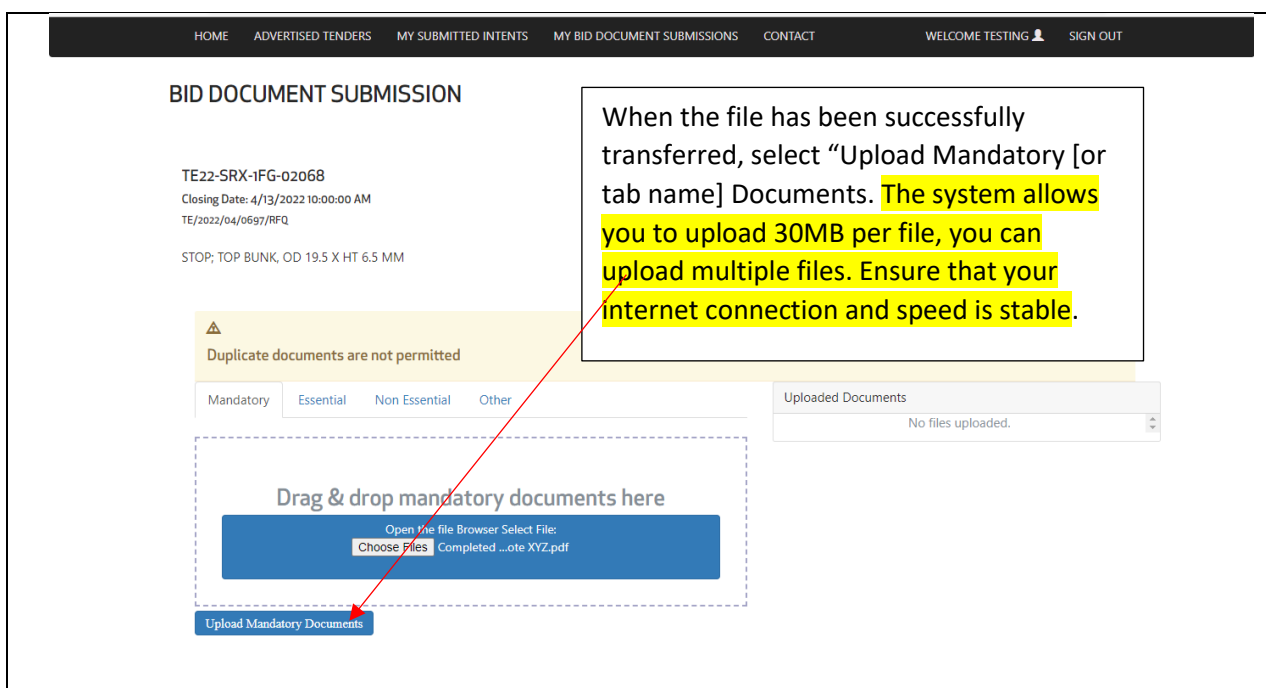
Drag & drop mandatory documents here

Open the file Browser Select File:
Choose Files Completed ...ote XYZ.pdf

Upload Mandatory Documents

Uploaded Documents
No files uploaded.

When the file has been successfully transferred, select "Upload Mandatory [or tab name] Documents. The system allows you to upload 30MB per file, you can upload multiple files. Ensure that your internet connection and speed is stable.



The “Uploaded Documents” section will be updated to confirm that the document was uploaded, then click on “Submit Bid”

TE/2022/04/0697/RFQ
STOP; TOP BUNK, OD 19.5 X HT 6.5 MM

⚠ Duplicate documents are not permitted

Mandatory Essential Non Essential Other

Drag & drop mandatory documents here

Open the file Browser Select File:
Choose Files No file chosen

Upload Mandatory Documents

Uploaded Documents

Completed quote XYZ.pdf - Document Type: Mandatory Documents

Delete

Terms of Use

Information provided by the bidder through this portal constitute a binding bid submission/response and a commitment to deliver Transnet requirements. Kindly note that the system automatically ranks the outcome of the evaluation of price and BBBEE scoring based on the information provided. Pricing and BBBEE information provided is the responsibility of the bidder to ensure correctness and Transnet will only consider your latest submission made before the closing date.

← Back

→ Submit Bid

HOME ADVERTISED TENDERS MY SUBMITTED INTENTS **MY BID DOCUMENT SUBMISSIONS** CONTACT WELCOME TESTING SIGN OUT

MY BID DOCUMENT SUBMISSIONS

Show 10 entries Search:

Tender Reference Number	Name	Date Submitted	Company Name	View Details
TE/2022/04/0697/RFQ	TE22-SRX-1FG-02068	4/8/2022 8:59:06 AM	Transnet Engineering	View Details

Showing 1 to 1 of 1 entries

Previous 1 Next

The screen will progress to “MY BID DOCUMENT SUBMISSION”, where the “View Details” can be selected to confirm that all required information is submitted correctly.



T1.2

Tender Data



T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annexure C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts. The Standard for Uniformity in Construction Procurement published in Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019 is applicable as amended from time to time.

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

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

Clause	Data
C.1.1	The <i>Employer</i> is Transnet SOC Ltd (Reg No. 1990/000900/30)
C.1.2	The tender documents issued by the <i>Employer</i> comprise: Part T: The Tender 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 C: The contract Part C1: Agreements and contract data C1.1 Form of offer and acceptance C1.2 Contract data (Part 1 & 2) C1.3 Form of Securities Part C2: Pricing data C2.1 Pricing instructions C2.2 Bill of Quantities Part C3: Scope of work C3.1 Works Information Part C4: Site information C4.1 Site information
C.1.4	The Employer's agent is: Name: Address:
	Commodity Manager Lungelwa Mxokozeli Transnet National Ports Authority



TNPA Building
34 South Arm Road
Port of Cape Town
8001

E– mail

TNPATenderenquiries3@transnet.net

C.2.1

Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:

1. Stage One Step 1: Eligibility with regards to attendance at the compulsory clarification meeting:

An authorised representative of the tendering entity or a representative of a tendering entity that intends to form a Joint Venture (JV) must attend the compulsory clarification meeting in terms C2.7.

Any tenderer that fails to meet the stipulated pre-qualifying criteria will be regarded as an unacceptable tender.

2. Stage One Step 2: Test for Administrative Responsiveness

2.1 The test for administrative responsiveness will include the following:

Administrative responsiveness check

- Whether the Bid has been lodged on time
- Whether all Returnable Documents and/or schedules [where applicable] were completed and returned by the closing date and time
- Verify the validity of all returnable documents
- Verify if the Bid document has been duly signed by the authorised respondent

3. Stage One Step 3: Test for Substantive Responsiveness

3.1 The test for substantive responsiveness to this RFP will include the following:

Check for Substantive Responsiveness



- Whether any general and legislation qualification criteria set by Transnet, have been met
- Whether the Bid contains a priced offer as prescribed in the pricing and delivery schedule (Part 2: Pricing Data)
- Whether the Bid contains a Form of Offer and Acceptance. (C1.1: Form of Offer & Acceptance)
- Whether the Bid materially complies with the Scope of work given (Part C3: Scope of Work)
- Whether any technical pre-qualification criteria set by Transnet, have been met: CIDB grading of **8EP** or higher.
- Valid ISO certificate to confirm that the contractor is certified in Quality Management System by an accredited certification body.

4. Stage Two - Eligibility in terms of the Construction Industry Development Board:

a) Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of **8EP or higher** class of construction work, are eligible to have their tenders evaluated.

b) Joint Venture (JV)

Joint ventures are eligible to submit tenders subject to the following:

1. every member of the joint venture is registered with the CIDB,
2. the lead partner has a contractor grading designation of not lower than one level below the required class of construction works under consideration and possesses the required recognition status; and
3. 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 **8EP or higher** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations

The tenderer shall provide a certified copy of its signed joint venture agreement



Any tenderer that fails to meet the stipulated eligibility criteria will be regarded as an unacceptable tender.

5. Stage Three - Functionality:

The minimum number of evaluation points for functionality is: **60 points**

Only those tenderers who obtain the minimum qualifying score for functionality will be evaluated further in terms of price and the applicable preference point system. The minimum qualifying for score for functionality is 60 points.

The evaluation criteria for measuring functionality and the points for each criteria and, if any, each sub-criterion are as stated below in C.3.11 and in returnable Evaluation Schedules T2.2-03 to T2.2-09.

Only those tenderers who attain the minimum number of evaluation points for Functionality will be eligible for further evaluation, failure to meet the minimum threshold will result in the tender being disqualified and removed from any further consideration.

The functionality criteria and maximum score in respect of each of the criteria are as follows and shall be scored independently by not less than 2 (two) evaluators and averaged in accordance with the following schedules:

Functionality Criteria

The functionality criteria and maximum score in respect of each of the criteria are as follows:

(Please see CIDB Compiler guidance note T1.2 – Tender Data).

- T2.2-03 Company Previous Experience
- T2.2-04 Key Personnel Experience, Qualifications and Registrations
- T2.2-05 Quality Management
- T2.2-06 Health and Safety Management
- T2.2-07 Environmental Management
- T2.2-08 Programme
- T2.2-09 Method Statement

Each evaluation criteria will be assessed in terms of scores of 0, 20, 40, 60, 80 or 100. The scores of each of the evaluators will be averaged, weighted and then totalled to obtain the final score for functionality. (See CIDB Inform Practice Note #9).



	Note: Any tender not complying with the above-mentioned requirements, will be regarded as non-responsive and will therefore not be considered for further evaluation.	
C.2.7	The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. Tenderers must complete and sign the attendance register. Addenda will be issued to, and tenders will only be received from those tendering entities including those entities that intends forming a joint venture appearing on the attendance register. Tenderers are also required to bring their RFP document to the briefing session and have their returnable document T2.2-01 certificate of attendance signed off by the Employer's authorised representative.	
C.2.12	No alternative tender offers will be considered.	
C.2.13.3	Each tender offer shall be in the English Language .	
C.2.13.5	The <i>Employer's</i> details and identification details that are to be shown on each tender offer are as follows:	
C2.15.1	Identification details:	The tender documents must be uploaded with: - Name of Tenderer: Transnet Ports Authority - Contact person and details: Lungelwa Mxokozeli - The Tender Number: TNPA/2024/08/0003/73199/RFP The Tender Description: REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS. Documents must be marked for the attention of: <i>Employer's Agent: Lungelwa Mxokozeli</i>
C.2.13.9	Telephonic, telegraphic, facsimile or e-mailed tender offers will not be accepted.	
C.2.15	The closing time for submission of tender offers is: Time: 16:00 on the 17 October 2025	



Location: The Transnet e-Tender Submission Portal:
(<https://transnetetenders.azurewebsites.net>);

NO LATE TENDERS WILL BE ACCEPTED

C.2.16 The tender offer validity period is **12 weeks** after the closing date. Tenderers are to note that they may be requested to extend the validity period of their tender, on the same terms and conditions, if Transnet's internal evaluation and governance approval processes has not been finalised within the validity period.

C.2.23 The tenderer is required to submit with his tender:

1. A valid Tax Clearance Certificate issued by the South African Revenue Services.
Tenderers also to provide Transnet with a TCS PIN to verify Tenderers compliance status.
2. A **valid B-BBEE Certificate** from a Verification Agency accredited by the South African Accreditation System [**SANAS**], or a **sworn affidavit** confirming annual turnover and level of black ownership in case of all EMEs and QSEs with 51% black ownership or more together with the tender, in line with the code of good practice, together with the tender;
3. A valid CIDB certificate in the correct designated grading
4. Proof of registration on the Central Supplier Database;
5. Letter of Good Standing with the Workmen's compensation fund by the tendering entity or separate Letters of Good Standing from all members of a newly constituted JV.

Note: Refer to Section T2.1 for List of Returnable Documents

C.3.11 The minimum number of evaluation points for functionality is: **60 points.**

Functionality Criteria

The functionality criteria and maximum score in respect of each Criteria are as follows:



	Technical Evaluation Criteria	Weighting
T2.2-03	Company Previous Experience	20
T2.2-04	Key Personnel Experience, Qualifications and Registrations	30
T2.2-05	Quality Management	10
T2.2-06	Health and Safety Management	10
T2.2-07	Environmental Management	10
T2.2-08	Programme	10
T2.2-09	Method statement	10
	Total	100

Only those tenderers who attain the minimum number of evaluation points for Functionality will be eligible for further evaluation, failure to meet the minimum threshold will result in the tender being disqualified and removed from any further consideration.

C.3.11. Stage Four – Preference Points System

Only tenders that achieve the minimum qualifying score for functionality will be evaluated further in accordance with the 80/20 or 90/10 preference points systems as described in Preferential Procurement Regulations.

90 tender evaluation points will be allocated for price where the financial value of one or more responsive tenders received have a value higher than R50 million, inclusive of all applicable taxes,

80 tender evaluation points will be allocated for price where the financial value of one or more responsive tenders received have a value less than or equal to R50 million, inclusive of all applicable taxes,

Thresholds	Minimum Threshold
Technical / functionality	60

Evaluation Criteria	Final Weighted Scores	Final Weighted Scores
Price	80	90
Specific goals - Scorecard	20	10
TOTAL SCORE:	100	100

Up to 10 tender evaluation points (under the 90/10 points system) or up to 20 tender evaluation points under the 80/20 points system will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed. **Should the evidence required for any of the Specific Goals applicable in this tender not be provided, a tenderer will score zero preference points for that particular "Specific Goal".**

In terms of Transnet Preferential Procurement Policy (TPPP) and Procurement Manuals, the following preference points must be awarded to a bidder who provides the relevant required evidence for claiming point

Selected Specific Goal	Number of points allocated (20)	Number of points allocated (10)
B-BBEE Status Level of contributor (1 or 2)	4.00	2.00
The promotion of supplier development through subcontracting for a minimum of 30% of the value of a contract to South African companies which are: I. EMEs and/or QSEs black owned	16.00	8.00
Non-Compliant and/or B-BBEE Level 3-8 contributors	0.00	0.00
Total number of preference points	20.00	10.00

The following Table represents the evidence to be submitted for claiming preference points for applicable specific goals in a particular tender:

Specific Goals	Acceptable Evidence
B-BBEE Status Level of Contributor 1 or 2	B-BBEE Certificate / Sworn - Affidavit / CIPC B-BBEE Certificate (in case of JV, a consolidate scorecard will be accept) as per DTIC guidelines
The promotion of supplier development through subcontracting for a minimum of 30% of the value of a contract to South African companies which are: I. EMEs and/or QSEs black owned	• Sub-contracting agreement(s) • Subcontractors B-BBEE Certificate / Sworn - Affidavit / CIPC B-BBEE Certificate as per DTIC guidelines

The maximum points for this bid are allocated as follows:

DESCRIPTION	POINTS	POINTS
PRICE	80	90
• B-BBEE Status Level of Contributor 1 or 2 (4 or 2 points)	4	2
• The promotion of supplier development through subcontracting for a minimum of 30% of the value of a contract to South African companies which are: EMEs and/or QSEs black owned (16 or 8 points)	16	8
Non-compliant and/or Level 3-8 contributors	0	0
Total points for Price and Specific Goals must not exceed	100	100

Note: Transnet reserves the right to carry out an independent audit of the tenderers scorecard components at any stage from the date of close of the tenders until completion of the contract.

5. Stage Five to Seven – Commercial, Financial Analysis and Probity Checks Evaluations:

These evaluations will be conducted on Tenderers that have qualified on all stages of evaluations.

The number of paper copies of the signed contract to be provided

C.3.13

Tender offers will only be accepted if:



1. The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
2. the tenderer does not appear on Transnet's list for restricted tenderers and National Treasury's list of Tender Defaulters;
3. the tenderer has fully and properly completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state.
4. Transnet reserves the right to award the tender to the tenderer who scores the highest number of points overall, unless there are **objective criteria** which will justify the award of the tender to another tenderer. Objective criteria include but are not limited to the outcome of a due diligence exercise to be conducted. The due diligence exercise may take the following factors into account inter alia;

the tenderer:

- a) Bidder is not in good standing with Transnet National Ports Authority due to a poor track record of past performance with Transnet SOC Ltd and or Transnet National Ports Authority;
- b) There is clear, uncontrived and/or overwhelming evidence and/or facts that the bidder has or continues to be in breach of any of the provisions contained in the Integrity Pact;
- c) The Probity check undertaken by Transnet National Ports Authority establishes the existence of any unmitigated risks which would have a negative impact on the project;
- d) Unless the appointment of the bidder would result in a negative impact on Transnet's Return on Investment;
- e) It is necessary to rotate Suppliers to promote opportunities for other suppliers, in circumstances where the bidder has been awarded business previously and the award of the tender will result in inequitable allocation of business;
- f) The tenderer or its members, directors, partners:
 - Is under restrictions as contemplated in the Integrity Pact,
 - Is a subject of a process of restriction by Transnet or other state institution that Transnet may be aware of and there is a clear,



uncontrived and/or overwhelming evidence and/or facts in relation to the alleged wrongdoing on the basis of which the restriction process has been initiated;

g) cannot, as necessary and in relation to the proposed contract, demonstrate that it possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;

h) has no legal capacity to enter into the contract;

i) is insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, being wound up, has its affairs administered pursuant to a court order, has ceased or suspended their business activities, or is subject to legal proceedings in respect of any of the foregoing;

j) does not comply with the legal requirements, if any, stated in the tender data; and

k) is not able to perform the contract free of conflicts of interest.

l) is able, in the option of the employer to perform the contract free of conflicts of interest.

C.3.17 The number of paper copies of the signed contract to be provided by the Employer is 1 (one).

Signed

Date

Name

Position

Tenderer



PART 2: RETURNABLE DOCUMENTS

T2.1

List of Returnable Documents

T2.1 List of Returnable Documents

2.1.1 These schedules are required for pre-qualification and eligibility purposes:

- T2.2-01 **Stage One Eligibility Criteria Schedule** - Certificate of attendance at Compulsory Tender Clarification Meeting
- T2.2-02 **Stage Two** as per Construction Industry Development Board: **Eligibility Criteria Schedule** – CIDB Registration or Application
- T2.2-02A **ISO** Certificate

2.1.2 Stage Three: these schedules will be utilised for evaluation purposes:

- T2.2-03 **Evaluation Schedule:** Previous Experience
- T2.2-04 **Evaluation Schedule:** Key Personnel Experience, Qualifications and Registrations
- T2.2-05 **Evaluation Schedule:** Quality Management
- T2.2-06 **Evaluation Schedule:** Health and Safety Management
- T2.2-06A **Evaluation Schedule:** Health and Safety Questionnaire
- T2.2-06B **Evaluation Schedule:** Health and Safety Cost Breakdown
- T2.2-07 **Evaluation Schedule:** Environmental Management
- T2.2-08 **Evaluation Schedule:** Programme
- T2.2-09 **Evaluation Schedule:** Method Statement

2.1.3 Returnable Schedules:

General:

- T2.2-10 Authority to submit tender
- T2.2-11 Record of addenda to tender documents
- T2.2-12 Letter of Good Standing
- T2.2-13 Risk Elements
- T2.2-14 Availability of equipment and other resources
- T2.2-15 Schedule of proposed Subcontractors
- T2.2-16 Site Establishment requirements
- T2.2-17 Capacity and ability to meet delivery schedule
- T2.2-18 CIDB SFU ANNEX G Compulsory Enterprise Questionnaire

2.1.4 Agreement and Commitment by Tenderer:

- T2.2-19 Non-Disclosure Agreement
- T2.2-20 RFP Declaration Form

- T2.2-21 RFP – Breach of Law
- T2.2-22 Certificate of Acquaintance with Tender Document
- T2.2-23 Service Provider Integrity Pact
- T2.2-24 Supplier Code of Conduct
- T2.2-25 Certified copy of signed Joint Venture Agreement (where applicable)
- T2.2-26 Disclosure Information: Domestic Prominent Influential Persons (DPIP) OR Foreign Prominent Public Officials (FPPO)
- T2.2-27 Agreement in terms of Protection of Personal Information Act, 4 of 2013 ("POPIA")
- T2.2-28 Supplier Declaration Form

2.1.5 Bonds/Guarantees/Financial/Insurance:

- T2.2-29 Insurance provided by the Contractor
- T2.2-30 Form of Intent to provide a Performance Guarantee
- T2.2-31 Forecast Rate of Invoicing
- T2.2-32 Three (3) years audited financial statements

2.1.6 Stage Four: These schedules will be utilised for claiming points for preference point System (90/10)

- T2.2-33 B-BBEE Certificate or Sworn Affidavit or CIPC B-BBEE Certificate or Consolidated B-BBEE scorecard in case of JV, will be accepted as per DTIC guidelines.
- T2.2-34 The promotion of supplier development through subcontracting of a minimum of 30% of the value of a contract to/with EMEs and/or QSEs who are 51% and more owned by black people, youth, women or disabled people must submit:
 - Sub-contracting agreement/s and declaration / Joint Venture Agreement
 - Subcontractors CIPC registration documents
 - Subcontractors B-BBEE Certificate or Sworn Affidavit or CIPC B-BBEE Certificate as per DTIC guidelines
 - Certified copy/ies of ID Documents of the Owners which are 51% or more owned
 - by black women, youth and disabled people
 - Doctor's note confirming the disability and/or Employment Equity Act 1(EEA1) Form
- T2.2-35: Job-Creation Schedule

TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2)

YEARS

2.2 C1.1 Offer portion of Form of Offer & Acceptance

2.3 C1.2 Contract Data

2.4 C1.3 Forms of Securities

2.5 C2.1 Pricing Instructions (Bill of Quantities)

2.6 C2.2 Bill of Quantities



T2.2-01

Eligibility Criteria Schedule

T2.2-01: Eligibility Criteria Schedule:

Certificate of Attendance at Tender Clarification Meeting

This is to certify that

(Company Name)

Represented
by:

(Name and
Surname)

Was represented at the compulsory tender clarification meeting

Held at:	34 South Arm Rd, V&A Waterfront, Cape Town, 8001	
On (date)		Starting time: 10:00 am

Particulars of person(s) attending the meeting:

Name

Signature

Capacity

Attendance of the above company at the meeting was confirmed:

Name

Signature

**For and on Behalf of the
Employers Agent.**

Date



T2.2-02

**Eligibility Criteria Schedule – CIDB
Grading Designation**

T2.2-02: Eligibility Criteria Schedule - CIDB Grading Designation

Note to tenderers:

Tenderers are to indicate their CIDB Grading by filling in the table below. **Attach a copy of the CIDB Grading Designation or evidence of being capable of being so registered.**

CRS Number	Status	Grading	Expiry Date

- Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a **8EP or higher** class of construction work, are eligible to have their tenders evaluated.

2. Joint Venture (JV)

Joint ventures are eligible to submit tenders subject to the following:

- 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 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 **8EP or higher** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations
- the Contractor shall provide the employer with a certified copy of its signed joint venture agreement;
- and in the event that the joint venture is an 'Incorporated Joint Venture' the Memorandum of Incorporation to be provided within 4 (four) weeks of the Contract Date.

T2.2-02A: ISO CERTIFICATE:

This is to certify that the contractor is certified in Quality Management System by an accredited certification body.



T2.2-03:

Evaluation Schedule

Company Previous Experience

T2.2-03: Evaluation Schedule: Company Previous Experience (20 Points)

Note to tenderers:

The Tenderer is required to demonstrate a minimum of three (3) years' experience on Construction of Electrical Substations. Tenderer to submit reference letters or completion certificates for the past projects involving the construction of electrical substations.

2. Project Timeline:

All projects submitted as reference must have been completed within the last 8 years from the date of tender submission.

Index of documentation attached to this schedule

	DOCUMENT NAME
1	
2	
3	
4	
5	



The Tenderer shall submit the following: 1. Reference Letter or Completion Certificate shall have the following: a. Client's Company letterhead b. Client name and contact details c. Project description d. Year of project completion (Start & End Dates) e. Project duration f. Contract value g. Signed by the client 2. Project Timeline: All projects submitted as reference must have been completed within the last 8 years from the date of tender submission.	A letter or completion certificate that does not meet the above requirements is invalid even if it is submitted e.g (Reference letter or completion certificate not submitted or does not meet the minimum requirements indicated (client's company letterhead, client name and contact details, project description, year of project completion, duration, contract value, subcontractors, and signed by the client)).	0	20
	Reference Letter/Completion Certificate from previous client for: - 1 x construction project of similar nature AND - 1 x design project of similar nature.	20	
	Reference Letter/Completion Certificate from previous client for: - 2 x construction project of similar nature AND - 2 x design project of similar nature.	40	
	Reference Letter/Completion Certificate from previous client for: - 3 x construction project of similar nature AND - 3 x comparable design project of similar nature.	60	
	Reference Letter/Completion Certificate from previous client for: - 4 x comparable construction project of similar nature AND - 4 x comparable design project of similar nature.	80	
	Reference Letter/Completion Certificate from previous client for: - 5 x comparable construction project of similar nature AND - 5 x comparable design project of similar nature.	100	



T2.2-04:
Evaluation Schedule:
Key Personnel Experience,
Qualifications and Registrations

T2.2-04: Evaluation Schedule: Key Personnel Experience, Qualifications and Registrations: (30 Points)

The bidder to provide detailed CVs of each key personnel with the following:

- a) The roles and responsibilities for the works of each resource should be clearly stated.
- b) Detailed experience in this specific construction activity and positions held, such as recent assignments inclusive of total duration that has a bearing on the scope of work.
- c) The education, training (inter alia NEC3) and skills of the assigned staff in the specific sector, field, subject, etc. which is directly linked to the works. Relevant Qualifications (degrees, grades) and
- d) Membership of professional societies and relevant professional registrations to be attached

The scoring of the Key Personnel Experience, Qualifications and Registrations will be as follows:

Bundling the 3 requirements is a challenge where they did not address 1 requirement, you may have a challenge of having a score as it is impractical to cater for all the scenarios and have scores for them

It is suggested to separate these requirements for clear objective evaluation – see example shared on email

1. Construction Project Manager: Construction Project Manager must have the following qualification and experience and Professional Registration: a. BSc/BEng/BTech or equivalent qualification. b. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager. c. Minimum of Five (5) years of relevant experience. d. NEC3 Engineering and Construction Contract experience and a minimum of five (5) years' experience	Failed to provide required information or inadequate information is provided to determine a score. CV is not provided or CV submitted indicating experience in Construction Project Management with less than 1 year of relevant experience in construction of electrical substations. No valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager.	0	5
	CV submitted indicating experience in Construction Project Management with 1 year but less than 3 years of experience in Construction of Electrical substations, BSc/BEng/BTech or equivalent qualification (or higher) in Project Management, Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager.	20	
	CV submitted indicating experience in Construction Project Management with 4 years but less than 5 years of experience in Construction of Electrical substations, BSc/BEng/BTech or equivalent qualification (or higher) in Project Management, Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager.	40	
	CV submitted indicating experience in Construction Project Management with 5 years but less than 6 years of experience in Construction of Electrical substations, BSc/BEng/BTech or equivalent qualification (or higher) in Project Management, Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager.	60	
	CV submitted indicating experience in Construction Project Management with 6 years but less than 10 years of experience in Construction of Electrical substations, BSc/BEng/BTech or equivalent qualification (or higher) in Project Management, Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager.	80	
	CV submitted indicating experience in Construction Project Management with 10 or more years of experience in Construction of Electrical substations, BSc/BEng/BTech or equivalent qualification (or higher) in Project Management, Valid registration with the South African	100	

RANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS

	Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Project Manager.		
2. Construction Manager: a. BSc/BEng/BTech or equivalent qualification. b. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Manager. c. Minimum of Five(5) years of relevant experience. d. Experience with the NEC3 Engineering and Construction contract.	Failed to provide required information or inadequate information is provided to determine a score.	0	5
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Construction Management with less or equal to 2 years of relevant experience in similar projects. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Manager.	20	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Construction Management with 3 - 4 years of relevant experience in similar projects. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Manager.	40	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Construction Management with 5 to 6 years of relevant experience in similar projects. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Manager.	60	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Construction Management with 7 to 9 years of relevant experience in similar projects. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Manager.	80	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Construction Management with 10 or more years of relevant experience in similar projects. Valid registration with the South African Council for the Project and Construction Management Professions (SACPCMP) as a Professional Construction Manager.	100	
3. Civil Engineer or Civil Technologist a. BSc/BEng/BTech or equivalent qualification.	Failed to provide required information or inadequate information is provided to determine a score. No organogram submitted/ Functionality is not achieved.	0	4

RANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS

b. Valid registration with the ECSA (Pr Eng / Pr Tech Eng) registered. c. Minimum of Eight (5) years of relevant experience in Civil Design. d. Experience with the NEC3 Engineering and Construction contract.	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Civil Engineering with less or equal to 2 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional r Eng / Pr Tech Eng) registered.	20	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Civil Engineering with 3 to 4 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng/Pr Cert Eng) registered.	40	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Civil Engineering with less than 5 to 6 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng) registered.	60	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Civil Engineering with less than 8 to 9 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng) registered.	80	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Civil Engineering with 10 or more years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng) registered.	100	
4. Electrical Engineer / Electrical Technologist a. Minimum Requirements BSc/BEng/BTech or equivalent qualification. b. Valid registration with the ECSA (Pr Eng / Pr Tech Eng/Pr Cert Eng) registered. c. Minimum of Six(6) or more years of relevant experience. d. Experience with the NEC3 Engineering and Construction contract. e. Must also have Substation Automation System experience.	Failed to provide required information or inadequate information is provided to determine a score. No organogram submitted/ Functionality is not achieved.	0	4
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Electrical Engineering with less or equal to 1- 3 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional r Eng / Pr Tech Eng/Pr Cert Eng) registered.	20	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Electrical Engineering with 4 to 5 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng/Pr Cert Eng) registered.	40	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Electrical Engineering 6 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng/Pr Cert Eng) registered.	60	

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f. Electrician (A- Brown and Red Seal).	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Electrical Engineering with 7 to 9 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng/Pr Cert Eng) registered.	80	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Electrical Engineering with 10 or more years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng/Pr Cert Eng) registered.	100	
5. Structural Engineer a. BSc/BEng/BTech or equivalent qualification. b. Valid registration with the ECSA (Pr Eng / Pr Tech Eng) registered. c. Five (5) or more years of relevant experience. d. Experience with the NEC3 Engineering and Construction contract.	Failed to provide required information or inadequate information is provided to determine a score. No organogram submitted/ Functionality is not achieved.	0	4
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Structural Engineering with less or equal to 2 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional r Eng / Pr Tech) registered.	20	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Structural Engineering with 3 to 4 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng) registered.	40	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Structural Engineering with 5 to 6 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech) registered.	60	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Structural Engineering with 7 to 9 years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng) registered.	80	
	CV submitted with BSc/BEng/BTech or equivalent qualification (or higher) in Structural Engineering with 10 or more years of relevant experience in similar projects. Valid registration with the Engineering council of South African Council (ECSA) as a Professional Pr Eng / Pr Tech Eng) registered.	100	
6. Mechanical HVAC Contractor (a) Demonstrated experience in HVAC installations, maintenance, and repair work. Experience working with various HVAC systems, including split systems,	Failed to provide required information or inadequate information is provided to determine a score. No demonstration of previous experience. No submission of certifications.	0	2
	Provided experience in comparable projects in the construction of similar completed project x 1 to 2 projects as per (a) to (e).	20	
	Provided experience in comparable projects in the construction of similar completed project x 3 to 4 projects as per (a) to (e).	40	
	Provided experience in comparable projects in the construction of similar completed project x 5 to 6 projects as per (a) to (e).	60	

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ducted fan systems, VRF (Variable Refrigerant Flow) systems, etc (b) Contractors must hold a valid and active handling license issued by the South African Qualification and Certification Committee for Fire (SAQCC Fire) and Gas (SAQCC Gas). (d) Contractors must hold a valid and active certificate issued by South African Bureau of Standards (SABS). (e) Experience with the NEC3 Engineering and Construction contract.	Provided experience in comparable projects in the construction of similar completed project x 7 to 9 projects as per (a) to (e).	80	
	Provided experience in comparable projects in the construction of similar completed project x 10 or more projects as per (a) to (e)	100	
7. Mechanical Fire Contractor (a) Demonstrated experience in Fire installations, maintenance, and repair work. Experience working with various Fire systems, including gas suppression systems for FK-5-1-12 extinguishing agents, hose reels, hydrants, and fire extinguishers, as well as fire detection (panels, sensors, sirens, gas control and status units) systems, etc (b) Contractors must hold a valid and active handling license issued by the South African Qualification and Certification Committee for Fire (SAQCC Fire) and Gas (SAQCC Gas).	Failed to provide required information or inadequate information is provided to determine a score. No demonstration of previous experience. No submission of certifications.		2
	Provided experience in comparable projects in the construction of similar completed project x 1 to 2 projects as per (a) to (e).		
	Provided experience in comparable projects in the construction of similar completed project x 3 to 4 projects as per (a) to (e).		
	Provided experience in comparable projects in the construction of similar completed project x 5 to 6 projects as per (a) to (e).		
	Provided experience in comparable projects in the construction of similar completed project x 7 to 9 projects as per (a) to (e).		
	Provided experience in comparable projects in the construction of similar completed project x 10 or more project as per (a) to (e)		

RANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

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(d) Contractors must hold a valid and active certificate issued by South African Bureau of Standards (SABS). (e) Experience with the NEC3 Engineering and Construction contract.			
8. Architectural a. BSc/BEng/BTech/NDip or equivalent qualification. b. Eight (8) years or more years of relevant experience and experience with the NEC3 Engineering and Construction contract.	Failed to provide required information or inadequate information is provided to determine a score. CV is not provided or architectural personnel submitted indicating experience in architecture (substation buildings) with less than 1 year of relevant experience in architecture.	0	4
	CV of Architectural personnel submitted indicating experience in architecture (substation buildings) with 7 years but not more than 8 years of relevant experience in architectural works.	20	
	CV of Architectural personnel submitted indicating experience in architecture (substation buildings) with 7 years but not more than 8 years of relevant experience in architectural works.	40	
	CV of Architectural personnel submitted indicating experience in architecture (substation buildings) with 8 years but not more than 9 years of relevant experience in architectural works.	60	
	CV of Architectural personnel submitted indicating experience in architecture (substation building) with 9 years but not more than 10 years of relevant experience in architectural works.	80	
	CV of Architectural personnel submitted indicating experience in architecture (substation buildings) with 10 years or more years of relevant experience in architectural works.	100	

T2.2-05: Evaluation Schedule: Quality Management



T2.2-05: Evaluation Schedule – Quality Management (10 Points)

Due consideration must be given to the deliverables required to execute and complete the contract as per the:

- TNPA-QUAL-REQ-14.1 _General Quality Requirements for Contractors and Suppliers (**Annexure to the Scope of Works**)
- ISO 9001:2015 Quality Management Systems (QMS) requirements or industry standard for quality management system and must include:
 1. **Project Quality Plan** must be project specific and aligned to the TNPAQUAL- REQ-14.1_General Quality Requirements for Contractors and Suppliers.
 2. **CV of Quality Officer** supplemented by **Qualification** - ISO 9001:2015 QMS training certificates (Implementation of QMS and Auditing). The Quality Officer MUST have a minimum of 3 years' quality experience in construction projects.
 3. **Quality Control Plans** must be in line with the scope of works detailing the Engineering works (i.e., Civil, structural, electrical, mechanical, Marine etc.) These QCP's shall identify all inspections as detailed in the scope of works together with other tests and verifications required to demonstrate that the works comply with the scope of works, specifications, and drawings.

The tenderer shall as a minimum submit the following:

Project Quality Plan must be project specific and aligned to the TNPAQUAL- REQ-14.1_General Quality Requirements for Contractors and Suppliers. 1. Scope of works 2. Control of external provided services 3. Design and development 4. Audits 5. Control of non-conforming outputs	No Submission to determine score/Functionality is not met	0	3
	Project Quality Plan contains one (1) of the five (5) PQP requirements.	20	
	Project Quality Plan contains two (2) of the five (5) PQP requirements.	40	
	Project Quality Plan contains three (3) of the five (5) PQP requirements.	60	
	Project Quality Plan contains four (4) of the five (5) PQP requirements.	80	
	Project Quality Plan contains all five (5) of the PQP requirements.	100	

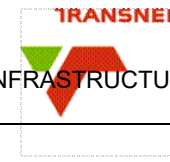
Qualification Quality Diploma/Technical Diploma and ISO 9001:2015 QMS training certificates (Implementation of QMS and Auditing).	No Submission to determine score/Functionality is not met	0	2
	ISO 9001:2015 QMS training certificate (Implementation of QMS)	20	
	ISO 9001:2015 QMS training certificate (Implementation of QMS and Auditing)	40	
	Quality Diploma /Technical Diploma and ISO 9001:2015 QMS training certificate (Implementation of QMS)	60	
	Quality Diploma, Technical Diploma and ISO 9001:2015 QMS certificates (Implementation of QMS)	80	
	Quality Diploma, Technical Diploma and ISO 9001:2015 QMS training certificates (Implementation of QMS and Auditing)	100	
CV of Quality Officer The Quality Officer MUST have a minimum of 3 years' quality experience in construction projects.	No Submission to determine score/Functionality is not met	0	2
	One (1) year Quality experience in Construction projects.	20	
	Two (2) years Quality experience in Construction projects.	40	
	Three (3) years Quality experience in Construction projects.	60	
	Four (4)- ten (10) years Quality experience in Construction projects.	80	
	More than ten (10) years Quality experience in Construction projects.	100	
	No Submission to determine score/Functionality is not met	0	3

Quality Control Plan (QCP) which includes the following requirements: 1. Sequence of activities 2. Procedure/code specifications 3. Intervention points 4. Field inspection checklist 5. Relevant signatories	Quality Control Plan contains one (1) of the five (5) QCP requirements	20	
	Quality Control Plan contains two (2) of the five (5) QCP requirements.	40	
	Quality Control Plan contains three (3) of the five (5) QCP requirements	60	
	Quality Control Plan contains four (4) of the five (5) QCP requirements.	80	
	Quality Control Plan contains all five (5) of the QCP requirements.	100	

Attached submissions to this schedule:



T2.2-06:
Evaluation Schedule:
Health and Safety Management

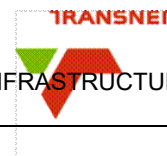


T2.2-06: Evaluation Schedule: Health and Safety Management (10 Points)

The Tenderer shall submit its Health and Safety documentation to the Employer at the time of tender, demonstrating the ability to manage health and safety relating to the scope of work.

The scoring of the Tender's Health and Safety criteria is as follows

Construction Health and Safety Officer/ Manager (Registration & Qualifications): Construction Health & Safety Officer/Manager must have a National Diploma in Safety Management, Environmental Health or other equivalent qualification (NQF Level 6) and must have a valid registration with SACPCMP as CHSO/CHSM.	No submission, No proof of valid SACPCMP registration or submission not as per requirements	0	5
	Valid proof of registration with SACPCMP, Health & Safety Short Courses (NQF Level 4) or any short course related to health and safety.	20	
	Valid proof of registration with SACPCMP and SAMTRAC/NEBOSH certificate (NQF Level 5).	40	
	Valid proof of registration with SACPCMP and National Diploma in Safety Management, Environmental Health or other equivalent qualification (NQF Level 6).	60	
	Valid proof of registration with SACPCMP and Bachelor of Technology/Advanced Diploma in Safety Management, Environmental Health or other equivalent qualification (NQF Level 7).	80	
	Valid proof of registration with SACPCMP and Bachelor of Technology/Advanced Diploma in Safety Management, Environmental Health or other equivalent qualification (NQF Level 7) and SAMTRAC/NEBOSH Certificate (NQF Level 5).	100	
Construction Health and Safety Officer/ Manager (Experience): Tenderer must submit a detailed CV with	No submission / information not available to determine experience or not as per requirements.	0	2
	Three (3) years or less of health and safety working experience in the construction environment.	20	
	More than three (3) years but less than 5 years of health and safety working experience in the construction environment.	40	



minimum of 5 years working experience in the construction projects as CHSO/CHSM.	Five (5) years' health and safety working experience in the construction environment.	60	
	Over five (5) years but less than seven (7) years' experience of health and safety working experience in the construction environment.	80	
	More than seven (7) years' health and safety working experience in the construction environment.	100	
Risk Assessment: The tenderer has submitted Risk Assessment Methodology and Risk Assessment, and submission of Risk Assessment indicating major activities of works and how the risks will be addressed and mitigated and must be in line with the scope of work (SoW): 1. Site Establishment 2. Electrical Power Supply 3. Substation Automation System 4. Battery Terminal Unit (BTU) 5. HVAC Systems 6. Fire Protection, Detection and Suppression Systems. 7. Civil Works 8. Working at Heights 9. Demolition Works	The Tenderer has submitted no information to determine a score or Risk Assessment submitted but not in line with the scope of work.	0	3
	The tenderer has submitted the Risk Assessment Methodology and Risk Assessment but one (1) - Three (3) major activities are provided that are in line with the scope of works.	20	
	The tenderer has submitted the Risk Assessment Methodology and Risk Assessment, but four (4) major activities are provided that are in line with the scope of works.	40	
	The tenderer has submitted the Risk Assessment Methodology and Risk Assessment but five (5) - seven (7) major activities are provided that are in line with the scope of works.	60	
	The tenderer has submitted the Risk Assessment Methodology and Risk Assessment, but eight (8) major activities are provided that are in line with the scope of works.	80	
	The tenderer has submitted the Risk Assessment Methodology and Risk Assessment, and all nine (9) major activities are provided that are in line with the scope of works.	100	



Attached submissions to this schedule:

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T2.2-06A:
Evaluation Schedule:
Health and Safety Questionnaire

T2.2-06A: Health and Safety Questionnaire

Health, Safety Questionnaire

1. SAFE WORK PERFORMANCE													
1A. Injury Experience / Historical Performance - Alberta													
Use the previous three years injury and illness records to complete the following:													
Year													
Number of medical treatment cases													
Number of restricted work day cases													
Number of lost time injury cases													
Number of fatal injuries													
Total recordable frequency													
Lost time injury frequency													
Number of worker manhours													
<table border="1"> <tr> <td>1 - Medical Treatment Case</td> <td>Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician</td> </tr> <tr> <td>2 – Restricted Work Day Case</td> <td>Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties</td> </tr> <tr> <td>3 – Lost Time injury Cases</td> <td>Any occupational injury that prevents the worker from performing any work for at least one day</td> </tr> <tr> <td>4 – Total Recordable Frequency</td> <td>Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours</td> </tr> <tr> <td>5- Lost Time Injury Frequency</td> <td>Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours</td> </tr> </table>				1 - Medical Treatment Case	Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician	2 – Restricted Work Day Case	Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties	3 – Lost Time injury Cases	Any occupational injury that prevents the worker from performing any work for at least one day	4 – Total Recordable Frequency	Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours	5- Lost Time Injury Frequency	Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours
1 - Medical Treatment Case	Any occupational injury or illness requiring treatment provided by a physician or treatment provided under the direction of a physician												
2 – Restricted Work Day Case	Any occupational injury or illness that prevents a worker from performing any of his/her craft jurisdiction duties												
3 – Lost Time injury Cases	Any occupational injury that prevents the worker from performing any work for at least one day												
4 – Total Recordable Frequency	Total number of Medical Treatment, Restricted Work and Lost Time Injury cases multiplied by 200,000 then divided by total manhours												
5- Lost Time Injury Frequency	Total number of Lost Time Injury cases multiplied by 200,000 then divide by total manhours												
1B. Workers' Compensation Experience													
Use the previous three years injury and illness records to complete the following (if applicable):													
Industry Code:		Industry Classification:											
Year													
Industry Rate													
Contractor Rate													
% Discount or Surcharge													
Is your Workers' Compensation account in good standing? (Please provide letter of confirmation)		☐ Yes ☐ No											
2. CITATIONS													
2A.	Has your company been cited, charged or prosecuted under Health, Safety and/or Environmental Legislation in the last 5 years? ☐ Yes ☐ No If yes, provide details:												
2B.	Has your company been cited, charged or prosecuted under the above Legislation in another Country, Region or State? ☐ Yes ☐ No If yes, provide details:												

3. CERTIFICATE OF RECOGNITION

Does your company have a Certificate of Recognition?

☐ Yes ☐ No If Yes, what is the Certificate No. _____ Issue Date _____

4. SAFETY PROGRAM

Do you have a written safety program manual?

☐ Yes ☐ No

If Yes, provide a copy for review

Do you have a pocket safety booklet for field distribution?

☐ Yes ☐ No

If Yes, provide a copy for review

Does your safety program contain the following elements:

	YES	NO		YES	NO
CORPORATE SAFETY POLICY	☐	☐	EQUIPMENT MAINTENANCE	☐	☐
INCIDENT NOTIFICATION POLICY	☐	☐	EMERGENCY RESPONSE	☐	☐
RECORDKEEPING & STATISTICS	☐	☐	HAZARD ASSESSMENT	☐	☐
REFERENCE TO LEGISLATION	☐	☐	SAFE WORK PRACTICES	☐	☐
GENERAL RULES & REGULATIONS	☐	☐	SAFE WORK PROCEDURES	☐	☐
PROGRESSIVE DISCIPLINE POLICY	☐	☐	WORKPLACE INSPECTIONS	☐	☐
RESPONSIBILITIES	☐	☐	INVESTIGATION PROCESS	☐	☐
PPE STANDARDS	☐	☐	TRAINING POLICY & PROGRAM	☐	☐
ENVIRONMENTAL STANDARDS	☐	☐	COMMUNICATION PROCESSES	☐	☐
MODIFIED WORK PROGRAM	☐	☐			

5. TRAINING PROGRAM

5A. Do you have an orientation program for new hire employees? ☐ Yes ☐ No

If Yes, include a course outline. Does it include any of the following:

	YES	NO		YES	NO
GENERAL RULES & REGULATIONS	☐	☐	CONFINED SPACE ENTRY	☐	☐
EMERGENCY REPORTING	☐	☐	TRENCHING & EXCAVATION	☐	☐
INJURY REPORTING	☐	☐	SIGNS & BARRICADES	☐	☐
LEGISLATION	☐	☐	DANGEROUS HOLES & OPENINGS	☐	☐
RIGHT TO REFUSE WORK	☐	☐	RIGGING & CRANES	☐	☐
PERSONAL PROTECTIVE EQUIPMENT	☐	☐	MOBILE VEHICLES	☐	☐
EMERGENCY PROCEDURES	☐	☐	PREVENTATIVE MAINTENANCE	☐	☐
PROJECT SAFETY COMMITTEE	☐	☐	HAND & POWER TOOLS	☐	☐
HOUSEKEEPING	☐	☐	FIRE PREVENTION & PROTECTION	☐	☐
LADDERS & SCAFFOLDS	☐	☐	ELECTRICAL SAFETY	☐	☐
FALL ARREST STANDARDS	☐	☐	COMPRESSED GAS CYLINDERS	☐	☐
AERIAL WORK PLATFORMS	☐	☐	WEATHER EXTREMES	☐	☐

5B. Do you have a program for training newly hired or promoted supervisors? ☐ Yes ☐ No (If Yes, submit an outline for evaluation. Does it include instruction on the following:					
	Yes	No		Yes	No
EMPLOYER RESPONSIBILITIES	☐	☐	SAFETY COMMUNICATION	☐	☐
EMPLOYEE RESPONSIBILITIES	☐	☐	FIRST AID/MEDICAL PROCEDURES	☐	☐
DUE DILIGENCE	☐	☐	NEW WORKER TRAINING	☐	☐
SAFETY LEADERSHIP	☐	☐	ENVIRONMENTAL REQUIREMENTS	☐	☐
WORK REFUSALS	☐	☐	HAZARD ASSESSMENT	☐	☐
INSPECTION PROCESSES	☐	☐	PRE-JOB SAFETY INSTRUCTION	☐	☐
EMERGENCY PROCEDURES	☐	☐	DRUG & ALCOHOL POLICY	☐	☐
INCIDENT INVESTIGATION	☐	☐	PROGRESSIVE DISCIPLINARY POLICY	☐	☐
SAFE WORK PROCEDURES	☐	☐	SAFE WORK PRACTICES	☐	☐
SAFETY MEETINGS	☐	☐	NOTIFICATION REQUIREMENTS	☐	☐

6. SAFETY ACTIVITIES

Do you conduct safety inspections? ☐ Yes ☐ No ☐ Weekly ☐ Monthly ☐ Quarterly

Describe your safety inspection process (include participation, documentation requirements, follow-up, report distribution).

Who follows up on inspection action items? _____

Do you hold site safety meetings for field employees? If Yes, how often?

☐ Yes ☐ No ☐ Daily ☐ Weekly ☐ Biweekly

Do you hold site meetings where safety is addressed with management and field supervisors?

☐ Yes ☐ No ☐ Weekly ☐ Biweekly ☐ Monthly

Is pre-job safety instruction provided before to each new task? ☐ Yes ☐ No

Is the process documented? ☐ Yes ☐ No

Who leads the discussion? _____

Do you have a hazard assessment process? ☐ Yes ☐ No

- Are hazard assessments documented? If yes, how are hazard assessments communicated and implemented on each project? Who is responsible for leading the hazard assessment process?

Does your company have policies and procedures for environmental protection, spill clean-up, reporting, waste disposal, and recycling as part of the Health & Safety Program?

☐ Yes ☐ No

How does your company measure its H&S success?

- Attach separate sheet to explain

7. SAFETY STEWARDSHIP

7A Are incident reports and report summaries sent to the following and how often?

	Yes	No	Monthly	Quarterly	Annually
Project/Site Manager	☐	☐	☐	☐	☐
Managing Director	☐	☐	☐	☐	☐
Safety Director/Manager	☐	☐	☐	☐	☐
/Chief Executive Officer	☐	☐	☐	☐	☐

7B How are incident records and summaries kept? How often are they reported internally?

	Yes	No	Monthly	Quarterly	Annually
Incidents totaled for the entire company	☐	☐	☐	☐	☐
Incidents totaled by project	☐	☐	☐	☐	☐
• Subtotaled by superintendent	☐	☐	☐	☐	☐
• Subtotaled by foreman	☐	☐	☐	☐	☐

7C How are the costs of individual incidents kept? How often are they reported internally?

	Yes	No	Monthly	Quarterly	Annually
Costs totaled for the entire company	☐	☐	☐	☐	☐
Costs totaled by project	☐	☐	☐	☐	☐
• Subtotaled by superintendent	☐	☐	☐	☐	☐
• Subtotaled by foreman/general foreman	☐	☐	☐	☐	☐

7D Does your company track non-injury incidents?

	Yes	No	Monthly	Quarterly	Annually
Near Miss	☐	☐	☐	☐	☐
Property Damage	☐	☐	☐	☐	☐
Fire	☐	☐	☐	☐	☐
Security	☐	☐	☐	☐	☐
Environmental	☐	☐	☐	☐	☐

8 PERSONNEL

List key health and safety officers planned for this project. Attach resume.

Name	Position/Title	Designation

Supply name, address and phone number of your company's corporate health and safety representative. Does this individual have responsibilities other than health, safety and environment?

Name	Address	Telephone Number

Other responsibilities:

9 REFERENCES

List the last three company's your form has worked for that could verify the quality and management commitment to your occupational Health & Safety program

Name and Company	Address	Phone Number



T2.2-06B:
Evaluation Schedule:
Health and Safety Cost Breakdown

T2.2-06B Health and Safety Cost Breakdown

Tenderer (Company)	Responsible Person	Designation	Date
Project/Tender Title	Project/Tender No.	Project Location / Description	

#	Cost element	Unit Cost (R)	# of Units	Total Cost (R)
1.	Human Resources			
2.	Systems Documentation			
3.	Meetings & Administration			
4.	H&S Training			
5.	PPE & Safety Equipment			
6.	Signage & Barricading			
7.	Workplace Facilities			
8.	Emergency & Rescue Measures			
9.	Hygiene Surveys & Monitoring			
10.	Medical Surveillance			
11.	Safe Transport of Workers			
12.	HazMat Management (e.g. asbestos /silica)			
13.	Substance Abuse Testing (3 kits @R500 pm)			
14.	H&S Reward & Recognition			

Total Health and Safety Estimate (R)	
Total Estimate Value (R)	
H&S Cost as % of Tender value	



T2.2-07:

Evaluation Schedule:

Environmental Management

T2.2-07: Evaluation Schedule: Environmental Management (10 points)

The Tenderer must review the following documents in preparation to meeting the environmental requirements, namely:

- a) Transnet Integrated Management System (TIMS) Policy Commitment Statement.
- b) Transnet Construction Environmental and Sustainability Specification (CESS) TRN-IMS-GRP-GDL-014.4 Rev 3.0
- c) Transnet Construction Environmental Management Standard Operating Procedure (CEM SOP). 009-TCC-CLO-SUS-11386 Rev 1.0

1. The tenderer must provide a project specific **Environmental Management Plan**. This plan must be clear on the following:
 - a. A description of the environmental impacts that need to be avoided, managed and mitigated, a description of how those impacts will be avoided, managed and mitigated (impact management actions).
 - b. The method and frequency of monitoring the implementation of the impact management actions.
 - c. A description of how the environmental incidents will be managed on site.
 - d. An indication of the roles and responsibilities in the implementation of the impact management actions.
 - e. Records to be kept.
 - f. How non-conformance/non-compliance will be dealt with.
2. The tenderer must provide an **Environmental Policy** signed by Top Management that displays the following key components, namely:
 - a. Commitment to comply with all applicable environmental laws, regulations and standards.
 - b. Commitment to pollution prevention
 - c. Emphasize the organisation's commitment to continual improvement in environmental performance.
 - d. Address the sustainable use of resources/ resource conservation.
 - e. Is communicated to all employees working for or on behalf of the Contractor.
3. Provide a CV showing environmental staff competencies, **experience and environmental qualification** (Degree/Diploma) relevant to environmental management functions, who will form part of the key environmental officer. **(Proof of Qualification must be submitted).**



4. The tenderer must provide a **list of projects** where construction environmental management duties have been executed including a brief description of such duties as listed on company’s experience reference letters. The format below must be used:

Project Name	Start date	End Date	Brief Description of the Environmental Duties in the Project.
1			
2			
3			
Etc.			

Attached submissions to this schedule:

By signing this Tender Schedule, the tenderer confirms that they will comply with the above requirements and in particular Transnet policy statements and environmental specifications.

Signed

Date

Name

Position

Tenderer

The scoring of the Tenderer's Environmental Submission will be as follows:

1. Site specific Environmental management system

	Environmental Management Plan	Environmental Policy	Environmental Officer Qualification	Environmental Officer Experience	List of projects where construction environmental management duties have been executed
Points	2	1	3	2	2
Score 0	The Tenderer has submitted no information to determine a score.	The Tenderer has submitted no information to determine a score.	The Tenderer has submitted no information or submitted Qualifications not in the Natural Science or Environmental Studies to determine a score.	Environmental officer has <1 year of relevant on-the-job experience.	The Tenderer has submitted no information to determine a score.
Score 20	EMP only responds to 1-2 of the items listed under paragraph 1 in T2.2-07.	Policy addresses 1 of the required elements listed under paragraph 2 in T2.2-07.	Environmental officer is in possession of a relevant Certificate in Natural Science or Environmental Studies	Environmental officer has ≥1 year but ≤3 years of relevant on-the-job experience.	Tenderer has only executed environmental management duties in 1 project.
Score 40	EMP only responds to 3 of the items listed under paragraph 1 in T2.2-07.	Policy addresses 2 of the required elements listed under paragraph 2 in T2.2-07.	Environmental officer is in possession of a Diploma in Natural Science or Environmental Studies	Environmental officer has >3 years but ≤4 years of relevant on-the-job experience.	Tenderer has only executed environmental management duties in 2 projects.

TENDER

Part T2- Returnable Schedules

T2.2-06: Evaluation Schedule: Environmental Management

Score 60	EMP only responds to 4 of the items listed under paragraph 1 in T2.2-07.	Policy addresses 3 of the required elements listed under paragraph 2 in T2.2-07.	Environmental officer is in possession of a Bachelor's degree/ B Tech in Natural Science or Environmental Studies.	Environmental officer has >4 years but ≤8 years of relevant on-the-job experience.	Tenderer has only executed environmental management duties in 3 projects.
Score 80	EMP only responds to 5 of the items listed under paragraph 1 in T2.2-07.	Policy addresses 4 of the required elements listed under paragraph 2 in T2.2-07.	Environmental officer is in possession of a Bachelor's degree with Honours in Natural Science or Environmental Studies.	Environmental officer has >8 but ≤10 years relevant on-the-job experience.	Tenderer has only executed environmental management duties in 4 projects.
Score 100	EMP responds to all the items listed under paragraph 1 in T2.2-07.	Policy addresses all the required elements listed under paragraph 2 in T2.2-07.	Environmental officer is in possession of a master's degree in Natural Science or Environmental Studies	Environmental officer has > 10 years of relevant on-the-job experience.	Tenderer has only executed environmental management duties in 5 projects.

T2.2-08: Evaluation Schedule: Programme

T2.2-08: Evaluation Schedule: Programme (10 Points)

Technical evaluation criteria for the replacement and construction of the new bulk electrical infrastructure at Sturrock Dry Dock in the Port of Cape Town for a period of 2 (two) year.

Evaluation Schedule: Programme

Note to tenderers:

The Tenderer provides the proposed programme in PDF either in Microsoft project or Primavera P6 (The soft copy maybe be requested during evaluation stage)

The tenderer shall provide the proposed programme detailed to a minimum of level 4 showing as a minimum the following.

▪ **Ability to provide the services:**

Ability to provide the services in terms of the *Employer's* requirements within the required timeframe indicating, in a logical sequence, the order and timing of the services that will take place in order to Provide the Works clearly indicating the capacity & capability to achieve the dates stated in the Contract Data.

▪ **Provision of Dates:**

The *Contractor* clearly indicates in the schedule all key milestones, activities & information related to the following –

- Float,
- Time Risk Allowances,
- Health and safety requirements,
- Procedures set out in this contract,
- Work by the *Employer* and Others,
- Access to a part of the site if later than its *access date*,
- Acceptances,
- Plant & Materials and other things to be provided by the employer,
- Information by Others,
- *starting date*, *access dates*, Key Dates and Completion Date
- planned Completion for each Key Date for each option and the complete works

▪ **Resourcing & Equipment:**

TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: THE REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK IN THE PORT OF CAPE TOWN FOR A PERIOD OF 2 (TWO) YEAR.

The *Tenderer indicates* for each operation, a statement of how the *Tenderer* plans to do the work identifying the principal Equipment and other resources which he plans to use.

The *Contractor's* programme shows the following levels:

- **Level 1 Master Schedule** – defines the major operations and interfaces between engineering design, procurement, fabrication and assembly of Plant and Materials, transportation, construction, testing and pre-commissioning, commissioning and Completion.
- **Level 2 Project Schedule** – summary schedules 'rolled up' from Level 3 Project Schedule described below.
- **Level 3 Project Schedule** – detailed schedules generated to demonstrate all operations identified on the programme from the starting date to Completion. The Project Manager notifies any subsequent layouts and corresponding filters on revised programmes.
- **Level 4 Project Schedule** – detailed discipline speciality level developed and maintained by the Contractor relating to all operations identified on the programme representing the daily activities by each discipline.



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: THE REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK IN THE PORT OF CAPE TOWN FOR A PERIOD OF 2 (TWO) YEAR.

The Tenderer must demonstrate the facility meets the minimum requirement.			<i>The tenderer shall demonstrate the following:</i>					
		Total 10	No response	Very Poor	Poor	Acceptable Response	Good Response	Excellent Response
			(0)	(20%)	(40%)	(60%)	(80%)	(100%)
Starting date and completion date are stated, and the programme does not exceed 24 months. (Shown Column and Gantt Chart)	1	2	No Response or Duration is not shown = 0%	Duration is 25 months or more = 20%	Duration is greater than 24 months but less than 25 months (Show Column or Gantt Chart) =40%	Duration is greater than 23 months but not more than 24 months (Show Column or Gantt Chart) =60%	Duration is greater than 22 months but less than 23 months (Show Column or Gantt Chart) =80%	Duration is less than 22 months (Show Column or Gantt Chart) =100%
Activities to be logically linked using critical path method (CPM). (Show the Critical	2	2	No response or programme does not link activities using CPM = 0	Activities are not all linked, and open ends exceeds 10% = 20	Activities are not all linked, and open ends are 10% or less = 40	All Activities are Completely linked using CPM with no open ends except for Start and Finish activities, Hard	All Activities are Completely linked using CPM with no open ends except for Start and Finish activities, no hard Constraints and Soft	All Activities are Completely linked using CPM with no open ends (except for Start and Finish activities, no constraints) No open ends in between

path, Predecessors and Successors Column)						Constraints not exceeding 5% of total Constraints = 60	constraints do not exceed 5% of total activities = 80	Predecessors and Successors on Sub critical and all activities linked and No linking on Work Breakdown Structure= 100
All activities as per level 4	3	1	No response or partially complete or schedule submission is not level 4, 3 or 2 (i.e., Level 1) = 0	The schedule is partially complete and detailed (level 2) = 20	The schedule is detailed (level 3) = 40	The schedule is complete and detailed (level 4) = 60	The schedule is complete and detailed Level 4 and Basis of schedule submitted = 80	The schedule is complete and detailed Level 4 and Basis of schedule submitted and Key Milestones = 100
The TNPA activities calendar on the schedule should represent the actual work week/month used. E.g., weekends, public holidays are marked as non-working days from start to finish date	4	2	No response = 0	The TNPA activities calendar on the schedule should represent the actual Weekends or Public holidays are marked as working days from start to finish date = 20	The TNPA activities calendar on the schedule should represent the actual Weekends are marked as working days from start to finish date = 40	The TNPA activities calendar on the schedule should represent the actual Weekends, public holidays are marked as non-working days from start to finish date = 60	The TNPA activities calendar on the schedule should represent the actual Weekends, public holidays, and builders break are marked as non-working days from start to finish date = 80	The TNPA activities calendar on the schedule should represent the actual Weekends, public holidays, and builders' breaks are marked as non-working days and float from start to finish date = 100



TRANSNET NATIONAL PORTS AUTHORITY

TENDER NUMBER: TNPA/2024/08/0003/73199/RFP

DESCRIPTION OF THE WORKS: THE REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK IN THE PORT OF CAPE TOWN FOR A PERIOD OF 2 (TWO) YEAR.

All activity durations to be realistic and activities that can be measured in days, Weeks and Months. (Show the duration Column)	5	1	No response = 0	All Activities durations to be realistic are broken down into Months (Show the duration Column) = 20	All Activities durations to be realistic are broken down into Months and Weeks (Show the duration Column) = 40	All activities durations to be realistic are broken down into Months, Weeks, and days (Show the duration Column) = 60	All activities durations to be realistic are broken down into Weeks and days (Show the duration Column) = 80	All activities durations to be realistic are broken down into days (Show the duration Column) = 100
Programme submission (Software) in PDF either Microsoft project or Primavera P6	6	2	No response = 0	Programme submitted not in Microsoft Project nor Primavera P6 nor Excel = 20	Programme submitted in Excel =40	Programme submitted in either Microsoft project or Primavera P6 =60	Programme submitted in either Microsoft project or Primavera P6 including resource loading (Show the resource Column or Gantt Chart) =80	Programme submitted in either Microsoft project or Primavera P6 including resource loading and cashflow forecast (Show the resource and cost Column or Gantt Chart) = 100

T2.2-09: Evaluation Schedule: Method Statement

T2.2-09: Evaluation Schedule: Method Statement (10 Points)

Note to tenderers:

Tenderer is to submit a method statement which responds to the scope of work and outlines proposed methodology including that relating, but not limited to, programme, technical approach, and an understanding of the project objectives. The method statement should explain the methodologies which are to be adopted and demonstrate compatibility. The method statement should also include and outline processes, procedures, and associated resources, to meet the requirements and indicate how risks will be managed. The Tenderer must highlight the issues of importance and explain the technical approach they would be adopted to address them.

The method statement should cover:

1. Outline of proposed methodology,
2. Narrative related to the programme as contained under T2.2-08,
3. Detailed method statement, technical approach, and construction sequencing in terms of the scope of works (Constructability),
4. Demonstrate an understanding of the project objectives, and
5. Detailed list of equipment, number thereof to execute the works, and areas it will be utilised.



The tenderer to issue a Method Statement on the required engineering, component procurement, component fabrication, installation and commissioning stages for the total scope of works which will include; A. Electrical Works Main Critical Activities 1. MV and LV Cable laying 2. MV and MCC Switchgear Installation 3. Power Transformer Installation 4. Substation Earthing and Lightning Protection, and Integration of new substations into existing infrastructure protection system 5. LV Distribution board installation 6. Testing and Commissioning of the system B. Substation Automation System (Communication and SCADA Works) 7. Control and Communication Cable Laying 8. Integration with Control System 9. SCADA Software Configuration 10. SCADA System Testing	No Method Statement submitted, none of the key activities addressed.	0	2.5
	Only One (1)– Two (2) components addressed; responses are vague, lacking technical relevance. No logic, sequencing, or risk considerations evident.	20	
	Three (3)– Four (4) components addressed with superficial or generic content. Limited technical understanding, sequencing, or project relevance.	40	
	Five (5)– Six (6) components addressed with sufficient technical clarity . Some evidence of sequencing, risk management, and understanding of project objectives. Limited innovation but meets basic expectations.	60	
	Seven (7)– Eight (8) components addressed with good technical detail. Methodology is logical, feasible, and aligned with project risks, sequencing, and required resources.	80	
	All ten (10) components are addressed comprehensively and in depth . Submission is tailored, innovative, and demonstrates excellent risk mitigation, sequencing, and potential to enhance project outcomes.	100	



Structural Main Activities The tenderer to issue a Method Statement on the compulsory structural works for the new electrical infrastructure which includes but not limited to the design of 1. Foundations 2. Cable route, coring and trenching 3. Surface Bed 4. Reinforcement Concrete Columns 5. Reinforced Concrete Roof Slab 6. Reinforced Concrete Beams 7. All Structural designs, analysis and associated approved construction drawings of the building.	No Method Statement submitted, none of the key activities addressed.	0	2.5
	Only One (1)– Three (3) components addressed; responses are vague, lacking technical relevance. No logic, sequencing, or risk considerations evident.	20	
	Four (4) components addressed with superficial or generic content. Limited technical understanding, sequencing, or project relevance.	40	
	Five (5) components addressed with sufficient technical clarity . Some evidence of sequencing, risk management, and understanding of project objectives. Limited innovation but meets basic expectations.	60	
	Six (6) components addressed with good technical detail. Methodology is logical, feasible, and aligned with project risks, sequencing, and required resources.	80	
	All Seven (7) components are addressed comprehensively and in depth . Submission is tailored, innovative, and demonstrates excellent risk mitigation, sequencing, and potential to enhance project outcomes.	100	
Civil Main Activities The tenderer to issue a Method Statement on the required civil works for the new electrical infrastructure which includes: 1. Building Works including bulk earthworks &	No Method Statement submitted, none of the key activities addressed.	0	2.5
	Only one (1) component addressed; responses are vague, lacking technical relevance. No logic, sequencing, or risk considerations evident.	20	
	Two (2) components addressed with superficial or generic content. Limited technical understanding, sequencing, or project relevance.	40	



bulk services 2. Stormwater services 3. Manhole Construction 4. Pavement Layer works 5. Trenching / Excavations for cable route.	Three (3) components addressed with sufficient technical clarity . Some evidence of sequencing, risk management, and understanding of project objectives. Limited innovation but meets basic expectations.	60	
	Four (4) components addressed with good technical detail. Methodology is logical, feasible, and aligned with project risks, sequencing, and required resources.	80	
	All Five (5) components are addressed comprehensively and in depth . Submission is tailored, innovative, and demonstrates excellent risk mitigation, sequencing, and potential to enhance project outcomes.	100	
Mechanical Main Activities The tenderer to issue a Method Statement on the required Mechanical Engineering works for the new Electrical substation. The Method statement shall encompass the detailed methodology the Contractor intends to undertake which shall start from the review of the tender drawings and technical specification, defining which parts of the design has been designed by the Employer and which part of the design the Contractor will be undertaking the design for, defining the methodology for approval of designs, workshop drawings and specifications, method of procuring plant and materials as well as quality control procedures,	No Method Statement submitted, none of the key activities addressed.	0	2.5
	Only one (1) component addressed; responses are vague, lacking technical relevance. No logic, sequencing, or risk considerations evident.	20	
	Two (2) components addressed with superficial or generic content. Limited technical understanding, sequencing, or project relevance.	40	
	Three (3) components addressed with sufficient technical clarity . Some evidence of sequencing, risk management, and understanding of project objectives. Limited innovation but meets basic expectations.	60	
	Four (4) components addressed with good technical detail. Methodology is logical, feasible, and aligned with project risks, sequencing, and required resources.	80	
	All Five (5) components are addressed comprehensively and in depth . Submission is tailored, innovative, and demonstrates excellent risk mitigation, sequencing, and potential to enhance project outcomes.	100	

FAT and SAT testing procedures, construction and sequencing methodologies, testing and commissioning procedures and approval by the Employers Engineers and close out phase. The methodology shall encompass (but not be limited to) the following items of scope: 1. HVAC system 2. Fire Suppression and Detection system (This must include gas suppression modeling using OEM-approved software). 3. Control system designed to integrate the Fire system with the HVAC system. This integration ensures that fire dampers close and mechanical equipment shuts down in the event of a fire. 4. Fire Stopping systems covering all penetrations and trenches that cross between rooms, ensuring full room integrity is re-established. 5. Room Integrity to guarantee that gas suppression is effectively sealed within the room. This must meet both OEM requirements and SANS compliance standards (including sealing and testing).			
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Index of documentation attached to this schedule:

Signed

Date

Name

Position

Tenderer



T2.2-10:
Evaluation Schedule:
Authority to Submit a Tender

T2.2-10: Authority to submit a Tender

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for his category of organisation or alternatively attach a certified copy of a company / organisation document which provides the same information for the relevant category as requested here.

A - COMPANY	B - PARTNERSHIP	C - JOINT VENTURE	D - SOLE PROPRIETOR

A. Certificate for Company

I, _____ chairperson of the board of directors _____
 _____, hereby confirm that by resolution of the
 board taken on _____ (date), Mr/Ms _____,
 acting in the capacity of _____, was authorised to sign all
 documents in connection with this tender offer and any contract resulting from it on behalf of
 the company.

Signed

Date

Name

Position

Chairman of the Board of Directors

B. Certificate for Partnership

We, the undersigned, being the **key partners** in the business trading as _____

_____ hereby authorise Mr/Ms _____

acting in the capacity of _____, to sign all documents in

connection with the tender offer for Contract _____ and any

contract resulting from it on our behalf.

Name	Address	Signature	Date

NOTE: This certificate is to be completed and signed by the full number of Partners necessary to commit the Partnership. Attach additional pages if more space is required.

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise

Mr/Ms _____, an authorised signatory of the company

_____, acting in the capacity of lead

partner, to sign all documents in connection with the tender offer for Contract _____

_____ and any contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

Furthermore we attach to this Schedule a copy of the joint venture agreement which incorporates a statement that all partners are liable jointly and severally for the execution of the contract and that the lead partner is authorised to incur liabilities, receive instructions and payments and be responsible for the entire execution of the contract for and on behalf of any and all the partners.

Name of firm	Address	Authorising signature, name (in caps) and capacity



T2.2-11:

Record of Addenda to Tender Documents

T2.2-11: Record of Addenda to Tender Documents

This schedule as submitted confirms 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 specific tender offer:

	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		



T2.2-12:
**Letter of Good Standing with the
Women's Compensation Fund**



T2.2-12 Letter/s of Good Standing with the Workmen’s Compensation Fund

Attached to this schedule is the Letter/s of Good Standing.

Name of Company/Members of Joint Venture:

.....
.....
.....
.....
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T2.2-13: Risk Elements

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There is a vertical margin line on the left side, creating a narrow left margin. The paper appears to be from a notebook or a standard ruled sheet of paper.

Part T2: Returnable Schedules

T2.2-13: Risk Elements



T2.2-14:

Availability of Equipment and Other Resources

T2.2-14: Availability of Equipment and Other Resources

The Tenderer to submit a list of all Equipment and other resources that will be used to execute the *works* as described in the Works Information.

Equipment Type and Availability – Description	Hourly Rate	Number of Equipment	Details of Ownership



T2.2-15: Schedule of Proposed Subcontractors

T2.2-15: Schedule of Proposed Subcontractors

The tenderer is required to provide details of all the sub-contractors that will be utilised in the execution of the *works*.

Note to tenderers:

- In terms of PPPFA Regulation 6 (5), A tenderer may not be awarded points for B-BBEE status level of contributor if the tender documents indicate that the tenderer intends subcontracting more than 25% of the value of the contract to any other person not qualifying for at least the points that the tenderer qualifies for, unless the intended subcontractor is an EME that has the capability to execute the subcontract.
- In terms of PPPFA Regulation 12 (3), A person awarded a contract may not subcontract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level of contributor that the person concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the contract.

Tenderer to note that after award, any deviations from this list of proposed sub-contractors will be subject to acceptance by the *Project Manager* in terms of the Conditions of Contract.

Provide information of the Sub-contractors below:

Name of Proposed Subcontractor			Address		Nature of work		Amount of Worked	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships		Military Veterans
	☐	☐	☐	☐	☐	☐		☐

Name of Proposed Subcontractor			Address		Nature of work		Amount of Worked	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships		Military Veterans

	☐	☐	☐	☐	☐	☐	☐	
Name of Proposed Subcontractor			Address		Nature of work		Amount of Worked	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships		Military Veterans
	☐	☐	☐	☐	☐	☐		☐

Name of Proposed Subcontractor			Address		Nature of work		Amount of Worked	Percentage of work
% Black Owned	EME	QSE	Youth	Women	Disabilities	Rural/ Underdeveloped areas/ Townships		Military Veterans
	☐	☐	☐	☐	☐	☐		☐



T2.2-16: Site Establishment Requirements

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There is a solid black vertical line along the left edge, creating a margin. The paper appears to be from a notebook or a standard ruled document.



T2.2-17:

Capacity and Ability to meet Delivery Schedule

T2.2-17: Capacity and Ability to meet Delivery Schedule

Note to tenderers:

The Tenderer is required to demonstrate to the *Employer* that the tenderer has sufficient current and future capacity to carry out the work as detailed in the Works Information and that the tenderer has the capacity and plans in place to meet the required delivery schedule as required. To this end, the following must be provided by the Tenderer:

A schedule detailing the following:

- Maximum quantity of work concurrently performed by the Tenderer in the recent past in order to illustrate his potential capacity to design, fabricate and/or construct work of a similar nature;
- Current and future work on his order book, showing quantity and type of equipment;
- Quantity of work for which the Tenderer has tenders in the market or is currently tendering on;
- The work as covered in this Works Information, planned and scheduled as per the Tenderer's capacities and methods but meeting the required delivery schedule.

Index of documentation attached to this schedule:

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T2.2-18:

**ANNEX G: Compulsory Enterprise
Questionnaire**

T2.2-18: ANNEX G Compulsory Enterprise Questionnaire

The following particulars hereunder must be furnished.

In the case of a Joint Venture, separate enterprise questionnaires in respect of each partner/member must be completed and submitted.

Section 1: Name of enterprise: _____

Section 2: VAT registration number, if any: _____

Section 3: CIDB registration number, if any: _____

Section 4: CSD number: _____

Section 5: Particulars of sole proprietors and partners in partnerships

Name	Identity number	Personal income tax number

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

Section 6: Particulars of companies and close corporations

Company registration number _____

Close corporation number _____

Tax reference number: _____

Section 7: The attached SBD4 must be completed for each tender and be attached as a tender requirement.

Section 8: The attached SBD 6 must be completed for each tender and be attached as a requirement.

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

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

Signed

Date

Name

Position

Enterprise
name



T2.2-19: Non-Disclosure Agreement



T2.2-19 NON-DISCLOSURE AGREEMENT

[..... 2020]

Note to tenderers: This Non-Disclosure Agreement is to be completed and signed by an authorised signatory:

THIS AGREEMENT is made effective as of day of 20..... by and between:

TRANSNET SOC LTD

(Registration No. 1990/000900/30), a company incorporated and existing under the laws of South Africa, having its principal place of business at Transnet Corporate Centre 138 Eloff Street , Braamfontein , Johannesburg 2000

and

.....

(Registration No.), a private company incorporated and existing under the laws of South Africa having its principal place of business at

.....

.....

WHEREAS

Transnet and the Company wish to exchange Information [as defined below] and it is envisaged that each party may from time to time receive Information relating to the other in respect thereof. In consideration of each party making available to the other such Information, the parties jointly agree that any dealings between them shall be subject to the terms and conditions of this Agreement which themselves will be subject to the parameters of the Tender Document.

IT IS HEREBY AGREED

1. INTERPRETATION

In this Agreement:

- 1.1 **Agents** mean directors, officers, employees, agents, professional advisers, contractors or sub-contractors, or any Group member;
- 1.2 **Bid or Bid Document** (hereinafter Tender) means Transnet's Request for Information [**RFI**] Request for Proposal [**RFP**] or Request for Quotation [**RFQ**], as the case may be;
- 1.3 **Confidential Information** means any information or other data relating to one party [the **Disclosing Party**] and/or the business carried on or proposed or intended to be carried on by that party and which is made available for the purposes of the Bid to the other party [the **Receiving Party**] or its Agents by the Disclosing Party or its Agents or recorded in agreed minutes following oral disclosure and any other information otherwise made available by the Disclosing Party or its Agents to the Receiving Party or its Agents, whether before, on or after the date of this Agreement, and whether in writing or otherwise, including any information, analysis or specifications derived from, containing or reflecting such information but excluding information which:

- 1.3.1 is publicly available at the time of its disclosure or becomes publicly available [other than as a result of disclosure by the Receiving Party or any of its Agents contrary to the terms of this Agreement]; or
- 1.3.2 was lawfully in the possession of the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] free of any restriction as to its use or disclosure prior to its being so disclosed; or
- 1.3.3 following such disclosure, becomes available to the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] from a source other than the Disclosing Party or its Agents, which source is not bound by any duty of confidentiality owed, directly or indirectly, to the Disclosing Party in relation to such information;
- 1.4 **Group** means any subsidiary, any holding company and any subsidiary of any holding company of either party; and
- 1.5 **Information** means all information in whatever form including, without limitation, any information relating to systems, operations, plans, intentions, market opportunities, know-how, trade secrets and business affairs whether in writing, conveyed orally or by machine-readable medium.

2. CONFIDENTIAL INFORMATION

- 2.1 All Confidential Information given by one party to this Agreement [the **Disclosing Party**] to the other party [the **Receiving Party**] will be treated by the Receiving Party as secret and confidential and will not, without the Disclosing Party's written consent, directly or indirectly communicate or disclose [whether in writing or orally or in any other manner] Confidential Information to any other person other than in accordance with the terms of this Agreement.
- 2.2 The Receiving Party will only use the Confidential Information for the sole purpose of technical and commercial discussions between the parties in relation to the Tender or for the subsequent performance of any contract between the parties in relation to the Tender.
- 2.3 Notwithstanding clause 2.1 above, the Receiving Party may disclose Confidential Information:
- 2.3.1 to those of its Agents who strictly need to know the Confidential Information for the sole purpose set out in clause 2.2 above, provided that the Receiving Party shall ensure that such Agents are made aware prior to the disclosure of any part of the Confidential Information that the same is confidential and that they owe a duty of confidence to the Disclosing Party. The Receiving Party shall at all times remain liable for any actions of such Agents that would constitute a breach of this Agreement; or
- 2.3.2 to the extent required by law or the rules of any applicable regulatory authority, subject to clause 2.4 below.
- 2.4 In the event that the Receiving Party is required to disclose any Confidential Information in accordance with clause 2.3.2 above, it shall promptly notify the Disclosing Party and cooperate with the Disclosing Party regarding the form, nature, content and purpose of such disclosure or any action which the Disclosing Party may reasonably take to challenge the validity of such requirement.

- 2.5 In the event that any Confidential Information shall be copied, disclosed or used otherwise than as permitted under this Agreement then, upon becoming aware of the same, without prejudice to any rights or remedies of the Disclosing Party, the Receiving Party shall as soon as practicable notify the Disclosing Party of such event and if requested take such steps [including the institution of legal proceedings] as shall be necessary to remedy [if capable of remedy] the default and/or to prevent further unauthorised copying, disclosure or use.
- 2.6 All Confidential Information shall remain the property of the Disclosing Party and its disclosure shall not confer on the Receiving Party any rights, including intellectual property rights over the Confidential Information whatsoever, beyond those contained in this Agreement.

3. RECORDS AND RETURN OF INFORMATION

- 3.1 The Receiving Party agrees to ensure proper and secure storage of all Information and any copies thereof.
- 3.2 The Receiving Party shall keep a written record, to be supplied to the Disclosing Party upon request, of the Confidential Information provided and any copies made thereof and, so far as is reasonably practicable, of the location of such Confidential Information and any copies thereof.
- 3.3 The Company shall, within 7 [seven] days of receipt of a written demand from Transnet:
- 3.3.1 return all written Confidential Information [including all copies]; and
- 3.3.2 expunge or destroy any Confidential Information from any computer, word processor or other device whatsoever into which it was copied, read or programmed by the Company or on its behalf.
- 3.4 The Company shall on request supply a certificate signed by a director as to its full compliance with the requirements of clause 3.3.2 above.

4. ANNOUNCEMENTS

- 4.1 Neither party will make or permit to be made any announcement or disclosure of its prospective interest in the Tender without the prior written consent of the other party.
- 4.2 Neither party shall make use of the other party's name or any information acquired through its dealings with the other party for publicity or marketing purposes without the prior written consent of the other party.

5. DURATION

The obligations of each party and its Agents under this Agreement shall survive the termination of any discussions or negotiations between the parties regarding the Tender and continue thereafter for a period of 5 [five] years.

6. PRINCIPAL

Each party confirms that it is acting as principal and not as nominee, agent or broker for any other person and that it will be responsible for any costs incurred by it or its advisers in considering or pursuing the Tender and in complying with the terms of this Agreement.

7. ADEQUACY OF DAMAGES

Nothing contained in this Agreement shall be construed as prohibiting the Disclosing Party from pursuing any other remedies available to it, either at law or in equity, for any such threatened or actual breach of this Agreement, including specific performance, recovery of damages or otherwise.

8. PRIVACY AND DATA PROTECTION

8.1 The Receiving Party undertakes to comply with South Africa's general privacy protection in terms Section 14 of the Bill of Rights in connection with this Tender and shall procure that its personnel shall observe the provisions of such Act [as applicable] or any amendments and re-enactments thereof and any regulations made pursuant thereto.

8.2 The Receiving Party warrants that it and its Agents have the appropriate technical and organisational measures in place against unauthorised or unlawful processing of data relating to the Tender and against accidental loss or destruction of, or damage to such data held or processed by them.

9. GENERAL

9.1 Neither party may assign the benefit of this Agreement, or any interest hereunder, except with the prior written consent of the other, save that Transnet may assign this Agreement at any time to any member of the Transnet Group.

9.2 No failure or delay in exercising any right, power or privilege under this Agreement will operate as a waiver of it, nor will any single or partial exercise of it preclude any further exercise or the exercise of any right, power or privilege under this Agreement or otherwise.

9.3 The provisions of this Agreement shall be severable in the event that any of its provisions are held by a court of competent jurisdiction or other applicable authority to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law.

9.4 This Agreement may only be modified by a written agreement duly signed by persons authorised on behalf of each party.

9.5 Nothing in this Agreement shall constitute the creation of a partnership, joint venture or agency between the parties.

9.6 This Agreement will be governed by and construed in accordance with South African law and the parties irrevocably submit to the exclusive jurisdiction of the South African courts.

Signed

Date

Name

Position

Tenderer



T2.2-20: Tender Declaration Form

T2.2-20: TENDER DECLARATION FORM

NAME OF COMPANY: _____

We _____ do hereby certify that:

1. Transnet has supplied and we have received appropriate tender offers to any/all questions (as applicable) which were submitted by ourselves for tender clarification purposes;
2. we have received all information we deemed necessary for the completion of this Tender;
3. at no stage have we received additional information relating to the subject matter of this tender from Transnet sources, other than information formally received from the designated Transnet contact(s) as nominated in the tender documents;
4. we are satisfied, insofar as our company is concerned, that the processes and procedures adopted by Transnet in issuing this TENDER and the requirements requested from tenderers in responding to this TENDER have been conducted in a fair and transparent manner; and
5. furthermore, we acknowledge that a direct relationship exists between a family member and/or an owner / member / director / partner / shareholder (unlisted companies) of our company and an employee or board member of the Transnet Group as indicated below: *[Respondent to indicate if this section is not applicable]*

FULL NAME OF OWNER/MEMBER/DIRECTOR/

PARTNER/SHAREHOLDER:

ADDRESS:

Indicate nature of relationship with Transnet:

[Failure to furnish complete and accurate information in this regard may lead to the disqualification of your response and may preclude a Respondent from doing future business with Transnet]

We declare, to the extent that we are aware or become aware of any relationship between ourselves and Transnet (other than any existing and appropriate business relationship with Transnet) which could unfairly advantage our company in the forthcoming adjudication process, we shall notify Transnet immediately in writing of such circumstances.

6. We accept that any dispute pertaining to this tender will be resolved through Transnet Supply Chain Management (SCM) Complaints and Allegations Office process and will be subject to the Terms of Reference of SCM Complaints and Allegations Office. Transnet Supply Chain SCM Complaints and Allegations Office process must first be exhausted before judicial review of a decision is sought. (Refer "Important Notice to respondents" below).
7. We further accept that Transnet reserves the right to reverse a tender award or decision based on the recommendations of SCM Complaints and Allegations Office without having to follow a formal court process to have such award or decision set aside.

For and on behalf of duly authorised thereto
Name:
Signature:
Date:

IMPORTANT NOTICE TO RESPONDENTS

- Transnet established the SCM Complaints and Allegations Office to investigate any material complaint in respect of any tenders regardless of the value. Should a Respondent have any material concern regarding a tender process, a complaint may be lodged with Transnet SCM Complaints and Allegations Office for further investigation.
- It is incumbent on the Respondent to familiarise himself/herself with the Terms of Reference for the Transnet SCM Complaints and Allegations Office, details of which are available for review at Transnet's website www.transnet.net.
- An official complaint form which will be shared upon receipt of a complaint should be completed and submitted, together with any supporting documentation, to groupscmcomplaints@transnet.net
- All Respondents should note that a complaint must be made in good faith. If a complaint is made in bad faith, Transnet reserves the right to place such a bidder on its List of Excluded Bidders.



T2.2-21:

Request for Proposal – Breach of Law

T2.2-21: REQUEST FOR PROPOSAL – BREACH OF LAWNAME OF COMPANY:

I / We _____ do hereby certify that ***I/we have/have not been*** found guilty during the preceding 5 (five) years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or other administrative body. The type of breach that the Tenderer is required to disclose excludes relatively minor offences or misdemeanours, e.g. traffic offences.

Where found guilty of such a serious breach, please disclose:

NATURE OF BREACH:

_____DATE OF BREACH:

Furthermore, I/we acknowledge that Transnet SOC Ltd reserves the right to exclude any Tenderer from the tendering process, should that person or company have been found guilty of a serious breach of law, tribunal or regulatory obligation.

Signed on this _____ day of _____ 20____

SIGNATURE OF TENDER



T2.2-22:
**Certificate of Acquaintance with
Tender Documents**

T2.2-22 Certificate of Acquaintance with Tender Documents

NAME OF TENDERING ENTITY:

1. By signing this certificate I/we acknowledge that I/we have made myself/ourselves thoroughly familiar with, and agree with all the conditions governing this RFP. This includes those terms and conditions of the Contract, the Supplier Integrity Pact, Non-Disclosure Agreement etc. contained in any printed form stated to form part of the documents thereof, but not limited to those listed in this clause.
2. I/we furthermore agree that Transnet SOC Ltd shall recognise no claim from me/us for relief based on an allegation that I/we overlooked any tender/contract condition or failed to take it into account for the purpose of calculating my/our offered prices or otherwise.
3. I/we understand that the accompanying Tender will be disqualified if this Certificate is found not to be true and complete in every respect.
4. For the purposes of this Certificate and the accompanying Tender, I/we 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 Services as the Tenderer and/or is in the same line of business as the Tenderer
5. 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.
6. In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;

- b) geographical area where Services 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 winning the tender.
7. 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 Services to which this tender relates.
8. 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.
9. I/We am/are 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 Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and/or may be reported to the National Prosecuting Authority [NPA] for criminal investigation. In addition, Tenderers that submit suspicious tenders may be restricted from conducting business with the public sector for a period not exceeding 10 [ten] years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Signed on this _____ day of _____ 20____

SIGNATURE OF TENDERER



T2.2-23:

Service Provider Integrity Pact

T2.2-23 Service Provider Integrity Pact

Important Note: All potential tenderers must read this document and certify in the RFP Declaration Form that that have acquainted themselves with, and agree with the content.

The contract with the successful tenderer will automatically incorporate this Integrity Pact and shall be deemed as part of the final concluded contract.

INTEGRITY PACT

Between

TRANSNET SOC LTD

Registration Number: 1990/000900/30

("Transnet")

and

The Contractor (hereinafter referred to as the "Tenderer/Service Providers/Contractor")

PREAMBLE

Transnet values full compliance with all relevant laws and regulations, ethical standards and the principles of economical use of resources, fairness and transparency in its relations with its Tenderers/Service Providers/Contractors.

In order to achieve these goals, Transnet and the Tenderer/Service Provider/Contractor hereby enter into this agreement hereinafter referred to as the "Integrity Pact" which will form part of the Tenderer's/Service Provider's/Contractor's application for registration with Transnet as a vendor.

The general purpose of this Integrity Pact is to agree on avoiding all forms of dishonesty, fraud and corruption by following a system that is fair, transparent and free from any undue influence prior to, during and subsequent to the currency of any procurement and/or reverse logistics event and any further contract to be entered into between the Parties, relating to such event.

All Tenderers/Service Providers/Contractor's will be required to sign and comply with undertakings contained in this Integrity Pact, should they want to be registered as a Transnet vendor.

1 OBJECTIVES

- 1.1 Transnet and the Tenderer/Service Provider/Contractor agree to enter into this Integrity Pact, to avoid all forms of dishonesty, fraud and corruption including practices that are anti-competitive in nature, negotiations made in bad faith and under-pricing by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:
 - a) Enable Transnet to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works, goods and services; and
 - b) Enable Tenderers/Service Providers/Contractors to abstain from bribing or participating in any corrupt practice in order to secure the contract.

2 COMMITMENTS OF TRANSNET

Transnet commits to take all measures necessary to prevent dishonesty, fraud and corruption and to observe the following principles:

- 2.1 Transnet hereby undertakes that no employee of Transnet connected directly or indirectly with the sourcing event and ensuing contract, will demand, take a promise for or accept directly or through intermediaries any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage

from the Tenderer, either for themselves or for any person, organisation or third party related to the contract in exchange for an advantage in the tendering process, Tender evaluation, contracting or implementation process related to any contract.

- 2.2 Transnet will, during the registration and tendering process treat all Tenderers/ Service Providers/Contractor with equity, transparency and fairness. Transnet will in particular, before and during the registration process, provide to all Tenderers/ Service Providers/Contractors the same information and will not provide to any Tenderers/Service Providers/Contractors confidential/additional information through which the Tenderers/Service Providers/Contractors could obtain an advantage in relation to any tendering process.
- 2.3 Transnet further confirms that its employees will not favour any prospective Tenderers/Service Providers/Contractors in any form that could afford an undue advantage to a particular Tenderer during the tendering stage, and will further treat all Tenderers/Service Providers/Contractors participating in the tendering process in a fair manner.
- 2.4 Transnet will exclude from the tender process such employees who have any personal interest in the Tenderers/Service Providers/Contractors participating in the tendering process.

3 OBLIGATIONS OF THE TENDERER / SERVICE PROVIDER

- 3.1 Transnet has a '**Zero Gifts**' Policy. No employee is allowed to accept gifts, favours or benefits.
 - a) Transnet officials and employees **shall not** solicit, give or accept, or from agreeing to solicit, give, accept or receive directly or indirectly, any gift, gratuity, favour, entertainment, loan, or anything of monetary value, from any person or juridical entities in the course of official duties or in connection with any operation being managed by, or any transaction which may be affected by the functions of their office.
 - b) Transnet officials and employees **shall not** solicit or accept gifts of any kind, from vendors, suppliers, customers, potential employees, potential vendors, and suppliers, or any other individual or organisation irrespective of the value.
 - c) Under **no circumstances** should gifts, business courtesies or hospitality packages be accepted from or given to prospective suppliers participating in a tender process at the respective employee's Operating Division, regardless of retail value.
 - d) Gratuities, bribes or kickbacks of any kind must never be solicited, accepted or offered, either directly or indirectly. This includes money, loans, equity, special

privileges, personal favours, benefit or services. Such favours will be considered to constitute corruption.

- 3.2 The Tenderer/Service Provider/Contractor commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its Tender or during any ensuing contract stage in order to secure the contract or in furtherance to secure it and in particular the Tenderer/Service Provider/Contractor commits to the following:
- a) The Tenderer/Service Provider/Contractor will not, directly or through any other person or firm, offer, promise or give to Transnet or to any of Transnet's employees involved in the tendering process or to any third person any material or other benefit or payment, in order to obtain in exchange an advantage during the tendering process; and
 - b) The Tenderer/Service Provider/Contractor will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any employee of Transnet, connected directly or indirectly with the tendering process, or to any person, organisation or third party related to the contract in exchange for any advantage in the tendering, evaluation, contracting and implementation of the contract.
- 3.3 The Tenderer/Service Provider/Contractor will not collude with other parties interested in the contract to preclude a competitive Tender price, impair the transparency, fairness and progress of the tendering process, Tender evaluation, contracting and implementation of the contract. The Tenderer / Service Provider further commits itself to delivering against all agreed upon conditions as stipulated within the contract.
- 3.4 The Tenderer/Service Provider/Contractor will not enter into any illegal or dishonest agreement or understanding, whether formal or informal with other Tenderers/Service Providers/Contractors. This applies in particular to certifications, submissions or non-submission of documents or actions that are restrictive or to introduce cartels into the tendering process.
- 3.5 The Tenderer/Service Provider/Contractor will not commit any criminal offence under the relevant anti-corruption laws of South Africa or any other country. Furthermore, the Tenderer/Service Provider/Contractor will not use for illegitimate purposes or for restrictive purposes or personal gain, or pass on to others, any information provided by Transnet as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

- 3.6 A Tenderer/Service Provider/Contractor of foreign origin shall disclose the name and address of its agents or representatives in South Africa, if any, involved directly or indirectly in the registration or tendering process. Similarly, the Tenderer / Service Provider / Contractor of South African nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the registration or tendering process.
- 3.7 The Tenderer/Service Provider/Contractor will not misrepresent facts or furnish false or forged documents or information in order to influence the tendering process to the advantage of the Tenderer/Service Provider/Contractor or detriment of Transnet or other competitors.
- 3.8 Transnet may require the Tenderer/Service Provider/Contractor to furnish Transnet with a copy of its code of conduct. Such code of conduct must address the compliance programme for the implementation of the code of conduct and reject the use of bribes and other dishonest and unethical conduct.
- 3.9 The Tenderer/Service Provider/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 3.10 The Tenderer/Service Provider/Contractor confirms that they will uphold the ten principles of the United Nations Global Compact (UNGC) in the fields of Human Rights, Labour, Anti-Corruption and the Environment when undertaking business with Transnet as follows:
- a) Human Rights
- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
 - Principle 2: make sure that they are not complicit in human rights abuses.
- b) Labour
- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
 - Principle 4: the elimination of all forms of forced and compulsory labour;
 - Principle 5: the effective abolition of child labour; and
 - Principle 6: the elimination of discrimination in respect of employment and occupation.
- c) Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

d) Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

4 INDEPENDENT TENDERING

4.1 For the purposes of that Certificate in relation to any submitted Tender, the Tenderer declares to fully 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.

4.2 The Tenderer has arrived at his submitted 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.

4.3 In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

- a) prices;
- b) geographical area where Goods or Services 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 RFP; or
- f) tendering with the intention of not winning the Tender.

- 4.4 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 Goods or Services to which his/her tender relates.
- 4.5 The terms of the Tender as submitted 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.
- 4.6 Tenderers are 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 Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and/or may be reported to the National Prosecuting Authority [**NPA**] for criminal investigation and/or may be restricted from conducting business with the public sector for a period not exceeding 10 [ten] years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.
- 4.7 Should the Tenderer find any terms or conditions stipulated in any of the relevant documents quoted in the Tender unacceptable, it should indicate which conditions are unacceptable and offer alternatives by written submission on its company letterhead, attached to its submitted Tender. Any such submission shall be subject to review by Transnet's Legal Counsel who shall determine whether the proposed alternative(s) are acceptable or otherwise, as the case may be.

5 DISQUALIFICATION FROM TENDERING PROCESS

- 5.1 If the Tenderer/Service Provider/Contractor has committed a transgression through a violation of section 3 of this Integrity Pact or in any other form such as to put its reliability or credibility as a Tenderer/Service Provider/Contractor into question, Transnet may reject the Tenderer's / Service Provider's / Contractor's application from the registration or tendering process and remove the Tenderer/Service Provider/Contractor from its database, if already registered.
- 5.2 If the Tenderer/Service Provider/Contractor has committed a transgression through a violation of section 3, or any material violation, such as to put its reliability or credibility into question. Transnet may after following due procedures and at its own discretion also exclude the Tenderer/Service Provider /Contractor from future tendering processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, which will include amongst

others the number of transgressions, the position of the transgressors within the company hierarchy of the Tenderer/Service Provider/Contractor and the amount of the damage. The exclusion will be imposed for up to a maximum of 10 (ten) years. However, Transnet reserves the right to impose a longer period of exclusion, depending on the gravity of the misconduct.

- 5.3 If the Tenderer/Service Provider/Contractor can prove that it has restored the damage caused by it and has installed a suitable corruption prevention system, or taken other remedial measures as the circumstances of the case may require, Transnet may at its own discretion revoke the exclusion or suspend the imposed penalty.

6 TRANSNET'S LIST OF EXCLUDED TENDERERS (BLACKLIST)

- 6.1 The process of restriction is used to exclude a company/person from conducting future business with Transnet and other organs of state for a specified period. No Tender shall be awarded to a Tenderer whose name (or any of its members, directors, partners or trustees) appear on the Register of Tender Defaulters kept by National Treasury, or who have been placed on National Treasury's List of Restricted Suppliers. Transnet reserves the right to withdraw an award, or cancel a contract concluded with a Tenderer should it be established, at any time, that a tenderer has been restricted with National Treasury by another government institution.
- 6.2 All the stipulations on Transnet's restriction process as laid down in Transnet's Supply Chain Policy and Procurement Procedures Manual (CPM included) are included herein by way of reference. Below follows a condensed summary of this restriction procedure.
- 6.3 On completion of the restriction procedure, Transnet will submit the restricted entity's details (including the identity number of the individuals and registration number of the entity) to National Treasury for placement on National Treasury's Database of Restricted Suppliers for the specified period of exclusion. National Treasury will make the final decision on whether to restrict an entity from doing business with any organ of state for a period not exceeding 10 years and place the entity concerned on the Database of Restricted Suppliers published on its official website.
- 6.4 The decision to restrict is based on one of the grounds for restriction. The standard of proof to commence the restriction process is whether a "*prima facie*" (i.e. on the face of it) case has been established.
- 6.5 Depending on the seriousness of the misconduct and the strategic importance of the Goods/Services, in addition to restricting a company/person from future

business, Transnet may decide to terminate some or all existing contracts with the company/person as well.

6.6 A Service Provider or Contractor to Transnet may not subcontract any portion of the contract to a blacklisted company.

6.7 Grounds for blacklisting include: If any person/Enterprise which has submitted a Tender, concluded a contract, or, in the capacity of agent or subcontractor, has been associated with such Tender or contract:

a) Has, in bad faith, withdrawn such Tender after the advertised closing date and time for the receipt of Tenders;

b) has, after being notified of the acceptance of his Tender, failed or refused to sign a contract when called upon to do so in terms of any condition forming part of the Tender documents;

c) has carried out any contract resulting from such Tender in an unsatisfactory manner or has breached any condition of the contract;

d) has offered, promised or given a bribe in relation to the obtaining or execution of the contract;

e) has acted in a fraudulent or improper manner or in bad faith towards Transnet or any Government Department or towards any public body, Enterprise or person;

f) has made any incorrect statement in a certificate or other communication with regard to the Local Content of his Goods or his B-BBEE status and is unable to prove to the satisfaction of Transnet that:

(i) he made the statement in good faith honestly believing it to be correct; and

(ii) before making such statement he took all reasonable steps to satisfy himself of its correctness;

g) caused Transnet damage, or to incur costs in order to meet the contractor's requirements and which could not be recovered from the contractor;

h) has litigated against Transnet in bad faith.

6.8 Grounds for blacklisting include a company/person recorded as being a company or person prohibited from doing business with the public sector on National

Treasury's database of Restricted Service Providers or Register of Tender Defaulters.

- 6.9 Companies associated with the person/s guilty of misconduct (i.e. entities owned, controlled or managed by such persons), any companies subsequently formed by the person(s) guilty of the misconduct and/or an existing company where such person(s) acquires a controlling stake may be considered for blacklisting. The decision to extend the blacklist to associated companies will be at the sole discretion of Transnet.

7 PREVIOUS TRANSGRESSIONS

- 7.1 The Tenderer/Service Provider/Contractor hereby declares that no previous transgressions resulting in a serious breach of any law, including but not limited to, corruption, fraud, theft, extortion and contraventions of the Competition Act 89 of 1998, which occurred in the last 5 (five) years with any other public sector undertaking, government department or private sector company that could justify its exclusion from its registration on the Tenderer's/Service Provider's/Contractor's database or any tendering process.
- 7.2 If it is found to be that the Tenderer/Service Provider/Contractor made an incorrect statement on this subject, the Tenderer/Service Provider/Contractor can be rejected from the registration process or removed from the Tenderer/Service Provider/Contractor database, if already registered, for such reason (refer to the Breach of Law Returnable Form contained in the document.)

8 SANCTIONS FOR VIOLATIONS

- 8.1 Transnet shall also take all or any one of the following actions, wherever required to:
- a) Immediately exclude the Tenderer/Service Provider/Contractor from the tendering process or call off the pre-contract negotiations without giving any compensation the Tenderer/Service Provider/Contractor. However, the proceedings with the other Tenderer/Service Provider/Contractor may continue;
 - b) Immediately cancel the contract, if already awarded or signed, without giving any compensation to the Tenderer/Service Provider/Contractor;
 - c) Recover all sums already paid by Transnet;
 - d) Encash the advance bank guarantee and performance bond or warranty bond, if furnished by the Tenderer/Service Provider/Contractor, in order to recover the payments, already made by Transnet, along with interest;
 - e) Cancel all or any other contracts with the Tenderer/Service Provider/Contractor; and

- f) Exclude the Tenderer/ Service Provider/Contractor from entering into any Tender with Transnet in future.

9 CONFLICTS OF INTEREST

9.1 A conflict of interest includes, inter alia, a situation in which:

- a) A Transnet employee has a personal financial interest in a tendering / supplying entity; and
- b) A Transnet employee has private interests or personal considerations or has an affiliation or a relationship which affects, or may affect, or may be perceived to affect his / her judgment in action in the best interest of Transnet, or could affect the employee's motivations for acting in a particular manner, or which could result in, or be perceived as favouritism or nepotism.

9.2 A Transnet employee uses his / her position, or privileges or information obtained while acting in the capacity as an employee for:

- a) Private gain or advancement; or
- b) The expectation of private gain, or advancement, or any other advantage accruing to the employee must be declared in a prescribed form.

Thus, conflicts of interest of any Tender committee member or any person involved in the sourcing process must be declared in a prescribed form.

9.3 If a Tenderer/Service Provider/Contractor has or becomes aware of a conflict of interest i.e. a family, business and / or social relationship between its owner(s)/ member(s)/director(s)/partner(s)/shareholder(s) and a Transnet employee/ member of Transnet's Board of Directors in respect of a Tender which will be considered for the Tender process, the Tenderer/Service Provider/ Contractor:

- a) must disclose the interest and its general nature, in the Request for Proposal ("RFX") declaration form; or
- b) must notify Transnet immediately in writing once the circumstances has arisen.

9.4 The Tenderer/Service Provider/Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any committee member or any person involved in the sourcing process, where this is done, Transnet shall be entitled forthwith to rescind the contract and all other contracts with the Tenderer/Service Provider/Contractor.

10 DISPUTE RESOLUTION

10.1 Transnet recognises that trust and good faith are pivotal to its relationship with its Tenderer / Service Provider / Contractor. When a dispute arises between Transnet and its Tenderer / Service Provider / Contractor, the parties should use their best endeavours to resolve the dispute in an amicable manner, whenever possible. Litigation in bad faith negates the principles of trust and good faith on

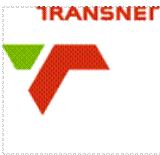
which commercial relationships are based. Accordingly, following a blacklisting process as mentioned in paragraph 6 above, Transnet will not do business with a company that litigates against it in bad faith or is involved in any action that reflects bad faith on its part. Litigation in bad faith includes, but is not limited to the following instances:

- a) **Vexatious proceedings:** these are frivolous proceedings which have been instituted without proper grounds;
- b) **Perjury:** where a Tenderer / Service Provider / Contractor make a false statement either in giving evidence or on an affidavit;
- c) **Scurrilous allegations:** where a Tenderer / Service Provider / Contractor makes allegations regarding a senior Transnet employee which are without proper foundation, scandalous, abusive or defamatory; and
- d) **Abuse of court process:** when a Tenderer / Service Provider / Contractor abuses the court process in order to gain a competitive advantage during a Tender process.

11 GENERAL

- 11.1 This Integrity Pact is governed by and interpreted in accordance with the laws of the Republic of South Africa.
- 11.2 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the law relating to any civil or criminal proceedings.
- 11.3 The validity of this Integrity Pact shall cover all the tendering processes and will be valid for an indefinite period unless cancelled by either Party.
- 11.4 Should one or several provisions of this Integrity Pact turn out to be invalid the remainder of this Integrity Pact remains valid.
- 11.5 Should a Tenderer/Service Provider/Contractor be confronted with dishonest, fraudulent or corruptive behaviour of one or more Transnet employees, Transnet expects its Tenderer/Service Provider/Contractor to report this behaviour directly to a senior Transnet official/employee or alternatively by using Transnet's "Tip-Off Anonymous" hotline number 0800 003 056, whereby your confidentiality is guaranteed.

The Parties hereby declare that each of them has read and understood the clauses of this Integrity Pact and shall abide by it. To the best of the Parties' knowledge and belief, the information provided in this Integrity Pact is true and correct.



I duly authorised by the tendering entity, hereby certify
that the tendering entity are **fully acquainted** with the contents of the Integrity Pact
and further **agree to abide by it** in full.

Signature

Date



T2.2-24

Supplier Code of Conduct

T2.2-24 : Supplier Code of Conduct

Transnet SOC Limited aims to achieve the best value for money when buying or selling goods and obtaining services. This however must be done in an open and fair manner that supports and drives a competitive economy. Underpinning our process are several acts and policies that any supplier dealing with Transnet must understand and support. These are:

- The Transnet Procurement Policy – A guide for Tenderers.
- Section 217 of the Constitution - the five pillars of Public PSCM (Procurement and Supply Chain Management): fair, equitable, transparent, competitive and cost effective;
- The Public Finance Management Act (PFMA);
- The Broad Based Black Economic Empowerment Act (BBBEE)
- The Prevention and Combating of Corrupt Activities Act (PRECCA); and
- The Construction Industry Development Board Act (CIDB Act).

This code of conduct has been included in this contract to formally appraise Transnet Suppliers of Transnet's expectations regarding behaviour and conduct of its Suppliers.

Prohibition of Bribes, Kickbacks, Unlawful Payments, and Other Corrupt Practices

Transnet is in the process of transforming itself into a self-sustaining State Owned Enterprise, actively competing in the logistics industry. Our aim is to become a world class, profitable, logistics organisation. As such, our transformation is focused on adopting a performance culture and to adopt behaviours that will enable this transformation.

1. Transnet SOC Limited will not participate in corrupt practices. Therefore, it expects its suppliers to act in a similar manner.

- Transnet and its employees will follow the laws of this country and keep accurate business records that reflect actual transactions with, and payments to, our suppliers.
- Employees must not accept or request money or anything of value, directly or indirectly, from suppliers.
- Employees may not receive anything that is calculated to:
 - Illegally influence their judgement or conduct or to ensure the desired outcome of a sourcing activity;

- Win or retain business or to influence any act or decision of any person involved in sourcing decisions; or
 - Gain an improper advantage.
 - There may be times when a supplier is confronted with fraudulent or corrupt behaviour of Transnet employees. We expect our Suppliers to use our “Tip-offs Anonymous” Hot line to report these acts. (0800 003 056).
- 2. *Transnet SOC Limited is firmly committed to the ideas of free and competitive enterprise.***
- Suppliers are expected to comply with all applicable laws and regulations regarding fair competition and antitrust practices.
 - Transnet does not engage with non-value adding agents or representatives solely for the purpose of increasing BBBEE spend (fronting).
- 3. *Transnet’s relationship with suppliers requires us to clearly define requirements, to exchange information and share mutual benefits.***
- Generally, suppliers have their own business standards and regulations. Although Transnet cannot control the actions of our suppliers, we will not tolerate any illegal activities. These include, but are not limited to:
 - Misrepresentation of their product (origin of manufacture, specifications, intellectual property rights, etc);
 - Collusion;
 - Failure to disclose accurate information required during the sourcing activity (ownership, financial situation, BBBEE status, etc.);
 - Corrupt activities listed above; and
 - Harassment, intimidation or other aggressive actions towards Transnet employees.
 - Suppliers must be evaluated and approved before any materials, components, products or services are purchased from them. Rigorous due diligence is conducted and the supplier is expected to participate in an honest and straight forward manner.
 - Suppliers must record and report facts accurately, honestly and objectively. Financial records must be accurate in all material respects.

Conflicts of Interest

A conflict of interest arises when personal interests or activities influence (or appear to influence) the ability to act in the best interests of Transnet SOC Limited.

- Doing business with family members.
- Having a financial interest in another company in our industry

Where possible, contracts will be negotiated to include the above in the terms of such contracts. To the extent such terms are not included in contractual obligations and any of the above code is breached, then Transnet reserves its right to review doing business with these suppliers.

I, _____ of _____
(insert name of Director or as per Authority Resolution from Board of Directors) *(insert name of Company)*

hereby acknowledge having read, understood and agree to the terms and conditions set out in the "Transnet Supplier Code of Conduct."

Signed this on day _____ at

Signature



T2.2-25:
**Certified copy of signed Joint
Venture Agreement**

T2.2-25: Certified copy of signed joint venture agreement

(Where applicable)

Please indicate the submission:

Yes

☐

No

☐

Signed

Date

Name

Position

Tenderer



T2.2-26:

**Disclosure Information: Domestic
Prominent Influential Persons
(DPIP) OR Foreign Prominent
Public Officials (FPPO)**

T2.2-26: Disclosure Information : Domestic Prominent Influential Persons (DPIP) OR Foreign Prominent Public Officials (FPPO)

Transnet is free to procure the services of any person within or outside the Republic of South Africa in accordance with applicable legislation. Transnet shall not conduct or conclude business transactions, with any Respondents without having:

- Considered relevant governance protocols;
- Determined the DPIP or FPPO status of that counterparty; and
- Conducted a risk assessment and due diligence to assess the potential risks that may be posed by the business relationship.

As per the Transnet Domestic Prominent Influential Persons (DPIP) and Foreign Prominent Public Officials (FPPO) and Related Individuals Policy available on Transnet website <https://www.transnet.net/search/pages/results.aspx?k=FPIDP#k=DPIP>, Respondents are required to disclose any commercial relationship with a DPIP or FPPO (as defined in the Policy) by completing the following section:

The below form contains personal information as defined in the Protection of Personal Information Act, 2013 (the "Act"). By completing the form, the signatory consents to the processing of her/his personal information in accordance with the requirements of the Act. Consent cannot unreasonably be withheld.						
Is the Respondent (Complete with a "Yes" or "No")						
A DPIP/FPPO		Closely Related to a DPIP/FPPO		Closely Associated to a DPIP/FPPO		
List all known business interests, in which a DPIP/FPPO may have a direct/indirect interest or significant participation or involvement.						
No	Name of Entity / Business	Role in the Entity / Business (Nature of interest/ Participation)	Shareholding %	Registration Number	Status (Mark the applicable option with an X)	
					Active	Non-Active
1						
2						
3						

Respondents declaring a commercial relationship with a DPIP or FPPO are to note that Transnet is required to annually publish on its website a list of all business contracts entered into with DPIP or FPPO. This list will include successful Respondents, if applicable.



T2.2-27:
**Agreement in terms of Protection
of Personal Information Act, 4 of
2013 (“POPIA”)**

T2.2-27 Agreement in terms of Protection of Personal Information Act, 4 of 2013 ("POPIA")

1. PREAMBLE AND INTRODUCTION

- 1.1. The rights and obligation of the Parties in terms of the Protection of Personal Information Act, 4 of 2013 ("POPIA") are included as forming part of the terms and conditions of this contract.

2. PROTECTION OF PERSONAL INFORMATION

- 2.1. The following terms shall bear the same meaning as contemplated in Section 1 of the Protection of Person information act, No. of 2013 "(POPIA)":
consent; data subject; electronic communication; information officer; operator; person; personal information; processing; record; Regulator; responsible party; special information; as well as any terms derived from these terms.
- 2.2. The Operator will process all information by the Transnet in terms of the requirements contemplated in Section 4(1) of the POPIA:
Accountability; Processing limitation; Purpose specification; Further processing limitation; Information quality; Openness; Security safeguards and Data subject participation.
- 2.3. The Parties acknowledge and agree that, in relation to personal information of Transnet and the information of a third party that will be processed pursuant to this Agreement , the Operator is (.....) hereinafter Operator and the Data subject is "Transnet". Operator will process personal information only with the knowledge and authorisation of Transnet and will treat personal information and the information of a third party which comes to its knowledge as confidential and will not disclose it, unless so required by law or subject to the exceptions contained in the POPIA.
- 2.4. Transnet reserves all the rights afforded to it by the POPIA in the processing of any of its information as contained in this Agreement and the Operator is required to comply with all prescripts as detailed in the POPIA relating to all information concerning Transnet.
- 2.5. In terms of this Agreement, the Operator acknowledges that it will obtain and have access to personal information of Transnet and the information of a third party and agrees that it shall only process the information disclosed by Transnet in terms of this Agreement and only for the purposes as detailed in this Agreement and in accordance with any applicable law.
- 2.6. Should there be a need for the Operator to process the personal information and the information of a third party in a way that is not agreed to in this Agreement, the Operator must request consent

from Transnet to the processing of its personal information or and the information of a third party in a manner other than that it was collected for, which consent cannot be unreasonably withheld.

- 2.7. Furthermore, the Operator will not otherwise modify, amend or alter any personal information and the information of a third party submitted by Transnet or disclose or permit the disclosure of any personal information and the information of a third party to any third party without prior written consent from Transnet.
- 2.8. The Operator shall, at all times, ensure compliance with any applicable laws put in place and maintain sufficient measures, policies and systems to manage and secure against all forms of risks to any information that may be shared or accessed pursuant to the services offered to Transnet in terms of this Agreement (physically, through a computer or any other form of electronic communication).
- 2.9. The Operator shall notify Transnet in writing of any unauthorised access to personal information and the information of a third party , cybercrimes or suspected cybercrimes, in its knowledge and report such crimes or suspected crimes to the relevant authorities in accordance with applicable laws, after becoming aware of such crimes or suspected crime. The Operator must inform Transnet of the breach as soon as it has occurred to allow Transnet to take all necessary remedial steps to mitigate the extent of the loss or compromise of personal information and the information of a third party and to restore the integrity of the affected personal information as quickly as is possible.
- 2.10. Transnet may, in writing, request the Operator to confirm and/or make available any personal information and the information of a third party in its possession in relation to Transnet and if such personal information has been accessed by third parties and the identity thereof in terms of the POPIA.
- 2.11. Transnet may further request that the Operator correct, delete, destroy, withdraw consent or object to the processing of any personal information and the information of a third party relating to the Transnet or a third party in the Operator's possession in terms of the provision of the POPIA and utilizing Form 2 of the POPIA Regulations .
- 2.12. In signing this addendum that is in terms of the POPIA, the Operator hereby agrees that it has adequate measures in place to provide protection of the personal information and the information of a third party given to it by Transnet in line with the 8 conditions of the POPIA and that it will provide to Transnet satisfactory evidence of these measures whenever called upon to do so by Transnet.

The Operator is required to provide confirmation that all measures in terms of the POPIA are in place when processing personal information and the information of a third party received from Transnet:

YES	
-----	--

NO	
----	--

2.13. Further, the Operator acknowledges that it will be held liable by Transnet should it fail to process personal information in line with the requirements of the POPIA. The Operator will be subject to any civil or criminal action, administrative fines or other penalty or loss that may arise as a result of the processing of any personal information that Transnet submitted to it.

2.14. Should a Tenderer have any complaints or objections to processing of its personal information, by Transnet, the Tenderer can submit a complaint to the Information Regulator on <https://www.justice.gov.za/infoereg/>, click on contact us, click on complaints.IR@justice.gov.za

3. SOLE AGREEMENT

3.1. The Agreement, constitute the sole agreement between the parties relating to the subject matter referred to in paragraph 1.1 of this and no amendment/variation/change shall be of any force and effect unless reduced to writing and signed by or on behalf of both parties.

Signed at _____ on this _____ day of _____ 2021

Name: _____

Title: _____

Signature: _____

..... (Pty) Ltd

(Operator)

Authorised signatory for and on behalf of(Pty) Ltd who warrants that he/she is duly authorised to sign this Agreement.

AS WITNESSES:

1. Name: _____ Signature: _____

2. Name: _____ Signature: _____



T2.2-28: SUPPLIER DECLARATION FORM

T2.2-28 SUPPLIER DECLARATION FORM

Transnet Vendor Management has received a request to load / change your company details onto the Transnet vendor master database. Please return the completed Supplier Declaration Form (SDF) together with the required supporting documents as per Appendix A to the Transnet Official who is intending to procure your company's services / products, to enable us to process this request. Please only submit the documentation relevant to your request.

Please Note: all organisations, institutions and individuals who wish to provide goods and/or services to organs of the State must be registered on the National Treasury's Central Supplier Database (CSD). This needs to be done via their portal at <https://secure.csd.gov.za/> **before applying to Transnet.**

General Terms and Conditions:

Please Note: Failure to submit the relevant documentation will delay the vendor creation / change process.

Where applicable, the respective Transnet Operating Division processing your application may request further or additional information from your company.

The Service Provider warrants that the details of its bank account ("the nominated account") provided herein, are correct and acknowledges that payments due to the Supplier will be made into the nominated account. If details of the nominated account should change, the Service Provider must notify Transnet in writing of such change, failing which any payments made by Transnet into the nominated account will constitute a full discharge of the indebtedness of Transnet to the Supplier in respect of the payment so made. Transnet will incur no liability for any payments made to the incorrect account or any costs associated therewith. In such an event, the Service Provider indemnifies and holds Transnet harmless in respect of any payments made to an incorrect bank account and will, on demand, pay Transnet any costs associated herewith.

Transnet expects its suppliers to timeously renew their Tax Clearance and B-BBEE certificates (Large Enterprises and QSEs less than 51% black owned) as well as sworn affidavits in the case of EMEs and QSEs with more than 51% black ownership as per Appendices C and D.

In addition, please take note of the following very important information:

1. If your annual turnover is R10 million or less, then in terms of the DTI Generic Codes of Good Practice, you are classified as an Exempted Micro Enterprise (EME). If your company is classified as an EME, please include in your submission a sworn affidavit confirming your company's most recent annual turnover is less than R10 million and percentage of black ownership and black female ownership in the company (Appendix C) OR B-BBEE certificate issued by a verification agency accredited by SANAS in terms of the EME scorecard should you feel you will be able to attain a better B-BBEE score. It is only in this context that an EME may submit a B-BBEE verification certificate. These EME sworn affidavits must be accepted by the . Government introduced this mechanism specifically to reduce the cost of doing business and regulatory burden for these entities and the template for the sworn affidavit is available at no cost on the website www.thedti.gov.za or EME certificates at CIPC from www.cipic.co.za.

The B-BBEE Commission said "that only time an EME can be verified by a SANAS accredited verification professional is when it wishes to maximise its B-BBEE points and move to a higher B-BBEE recognition level, and that must be done use the QSE Scorecard".

2. If your annual turnover is between R10 million and R50 million, then in terms of the DTI codes, you are classified as a Qualifying Small Enterprise (QSE). A QSE which is at least 51% black owned, is required to submit a sworn affidavit confirming their annual total revenue of between R10 million and R50 million and level of black ownership (Appendix D). QSE that does not qualify for 51% of black ownership, are required to submit a B-BBEE verification certificate issued by a verification agency accredited by SANAS their QSEs are required to submit a B-BBEE verification certificate issued by a verification agency accredited by SANAS.

Please Note: B-BBEE certificate and detailed scorecard should be obtained from an accredited rating agency (e.g. SANAS Member).

3. If your annual turnover exceeds R50 million, then in terms of the DTI codes, you are classified as a Large Enterprise. Large Enterprises are required to submit a B-BBEE level verification certificate issued by a verification agency accredited by SANAS.

Please Note: B-BBEE certificate and detailed scorecard should be obtained from an accredited rating agency (e.g. SANAS Member).

4. The supplier to furnish proof to the procurement department as required in the Fourth Schedule of the Income Tax Act. 58 of 1962 whether a supplier of service is to be classified as an "employee", "personal service provider" or "labour broker". Failure to do so will result in the supplier being subject to employee's tax.

5. **No payments can be made to a vendor until the** vendor has been registered / updated, and no vendor can be registered / updated until the vendor application form, together with its supporting documentation, has been received and processed. No payments can be made to a vendor until the vendor has met / comply with the procurement requirements.

6. It is in line with PPPFA Regulations, only valid B-BBEE status level certificate issued by an unauthorised body or person OR a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice, OR any other requirement prescribed in terms of the Broad- Based Black Economic Empowerment Act.

7. The B-BBEE Commission advises entities and organs of state to reject B-BBEE certificates that have been issued by verification agencies or professionals who are not accredited by South African National Accreditation Systems ("SANAS") as such B-BBEE certificates are invalid for lack of authority and mandate to issue them. A list of SANAS Accredited agencies is available on the SANAS website at www.sanas.co.za.

8. Presenting banking details. Please note: Banks have decided to enable the customers and provide the ability for customers to generate Account Confirmation/Bank Account letters via their online platform; this is a digital approach to the authentication of banking details.

SUPPLIER DECLARATION FORM

Supplier Declaration Form

Important Notice: all organisations, institutions and individuals who wish to provide goods and/or services to organs of the State must be registered on the National Treasury Central Supplier Database (CSD). This needs to be done via their portal at <https://secure.csd.gov.za/> **before applying to Transnet.**

CSD Number (MAAA xxxxxxx):

Company Trading Name						
Company Registered Name						
Company Registration No Or ID No If a Sole Proprietor						
Company Income Tax Number						
Form of Entity	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
	Non-profit (NPO's or NPC)	Personal Liability Co	State Owned Co	National Govt	Provincial Govt	Local Govt
	Education al Institution	Specialise d Profession	Financial Institution	Joint Venture	Foreign International	Foreign Branch Office

Did your company previously operate under another name?					Yes	No
If YES state the previous details below:						
Trading Name						
Registered Name						
Company Registration No Or ID No If a Sole Proprietor						
Form of Entity	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
	Non-profit (NPO's or NPC)	Personal Liability Co	State Owned Co	National Govt	Provincial Govt	Local Govt
	Education al Institution	Specialise d Profession	Financial Institution	Joint Venture	Foreign International	Foreign Branch Office

Your Current Company's VAT Registration Status	
VAT Registration Number	
If Exempted from VAT registration , state reason and submit proof from SARS in confirming the exemption status	

If your business entity is not VAT Registered, please submit a current original sworn affidavit (see example in Appendix I). Your Non VAT Registration must be confirmed annually.

Company Banking Details	Bank Name	
Universal Branch Code	Bank Account Number	

Company Physical Address		Code	
Company Postal Address		Code	
Company Telephone number			
Company Fax Number			
Company E-Mail Address			
Company Website Address			

Company Contact Person Name	
Designation	
Telephone	
Email	

Is your company a Labour Broker?	Yes		No	
Main Product / Service Supplied e.g. Stationery / Consulting / Labour etc.				
How many personnel does the business employ?	Full Time		Part Time	
Please Note: Should your business employ more than 2 full time employees who are not connected persons as defined in the Income Tax Act, please submit a sworn affidavit, as per Appendix II.				

Most recent Financial Year's Annual Turnover	<R10Million EME		>R10Million <R50Million QSE		>R50Million Large Enterprise	
--	---------------------------	--	--	--	--	--

Does your company have a valid proof of B-BBEE status?							Yes		No			
Please indicate your Broad Based BEE status (Level 1 to 9)				1	2	3	4	5	6	7	8	9
Majority Race of Ownership												
% Black Ownership		% Black Women Ownership		% Black Disabled person(s) Ownership					% Black Youth Ownership			
% Black Unemployed		% Black People Living in Rural Areas		% Black Military Veterans								
Please Note: Please provide proof of B-BBEE status as per Appendix C and D:												

- Large Enterprise and QSEs with less than 51% black ownership need to obtain a B-BBEE certificate and detailed scorecard from an accredited rating agency;
- EMEs and QSEs with at least 51% black ownership may provide an affidavit using the templates provided in Appendix C and D respectively;
- Black Disabled person(s) ownership will only be accepted if accompanied with a certified letter signed by a physician on the physician's letterhead confirming the disability;
- A certified South African identification document will be required for all Black Youth Ownership.

Supplier Development Information Required	
EMPOWERING SUPPLIER An Empowering Supplier is a B-BBEE compliant Entity which complies with at least three criteria if it is a large Entity, or one criterion if it is a Qualifying Small Enterprise ("QSE"), as detailed in Statement 400 of the New Codes. In terms of the requirements of an Empowering Supplier, numerous companies found it challenging to meet the target of 25% transformation of raw materials or beneficiation including local manufacturing, particularly so, if these companies imported goods or products from offshore. The matter was further compounded by the requirement for 25% of Cost of Sales, excluding labour cost and depreciation, to be procured from local producers or suppliers.	YES ☐ NO ☐
FIRST TIME SUPPLIER A supplier that we haven't as yet Traded within Transnet and will be registered via our database for the 1 st time.	YES ☐ NO ☐
SUPPLIER DEVELOPMENT PLAN Supplier Development Plan is a plan that when we as Transnet award a supplier a long term contract depending on the complexity of the Transaction. We will negotiate supplier development obligations that they must meet throughout the contract duration. e.g. we might request that they (create jobs or do skills development or encourage procurement from designated groups. (BWO, BYO & BDO etc.).	YES ☐ NO ☐
DEVELOPMENT PLAN DOCUMENT Agreed plan that will be crafted with the supplier in regards to their development (It could be for ED OR SD in terms of their developmental needs they may require with the company.	YES ☐ NO ☐ *If Yes- Attach supporting documents
ENTERPRISE DEVELOPMENT BENEFICIARY	YES ☐ NO ☐

A supplier that is not as yet in our value chain that we are assisting in their developmental area.	
SUPPLIER DEVELOPMENT BENEFICIARY	
A supplier that we are already doing business with or transacting with and we are also assisting them assisting them in their developmental area e.g. (They might require training or financial assistance etc.)	YES ☐ NO ☐
GRADUATION FROM ED TO SD BENEFICIARY	
When a supplier that we assisted with as an ED beneficiary then gets awarded a business and we start Transacting with.	YES ☐ NO ☐
ENTERPRISE DEVELOPMENT RECIPIENT	
A supplier that isn't in our value chain as yet but we have assisted them with an ED intervention	YES ☐ NO ☐

By signing below, I hereby verify that I am duly authorised to sign for and on behalf of firm / organisation and that all information contained herein and attached herewith are true and correct			
Name and Surname		Designation	
Signature		Date	

APPENDIX B

Affidavit or Solemn Declaration as to VAT registration status

Affidavit or Solemn Declaration

I, _____ solemnly swear/declare
that _____ is not a registered VAT
vendor and is not required to register as a VAT vendor because the combined value of taxable supplies
made by the provider in any 12 month period has not exceeded or is not expected to exceed R1million
threshold, as required in terms of the Value Added Tax Act.

Signature: _____

Designation: _____

Date: _____

Commissioner of Oaths

Thus signed and sworn to before me at _____ on this the _____
day of _____ 20_____,

the Deponent having knowledge that he/she knows and understands the contents of this Affidavit,
and that he/she has no objection to taking the prescribed oath, which he/she regards binding on
his/her conscience and that the allegations herein contained are all true and correct.

Commissioner of Oaths

SWORN AFFIDAVIT – B-BBEE QUALIFYING SMALL ENTERPRISE – GENERAL

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Enterprise Physical Address:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) who are citizens of the Republic of South Africa by birth or descent; or (b) who became citizens of the Republic of South Africa by naturalisation-i. i. before 27 April 1994; or ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"

Definition of "Black Designated Groups"	Black Designated Groups means: (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"
--	--

3. I hereby declare under Oath that:

- The Enterprise is _____% Black Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is _____% Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
- Black Youth % = _____%
- Black Disabled % = _____%
- Black Unemployed % = _____%
- Black People living in Rural areas % = _____%
- Black Military Veterans % = _____%

- Based on the Financial Statements/Management Accounts and other information available on

the latest financial year-end of _____, the annual Total Revenue was

between

R10,000,000.00 (Ten Million Rands) and R50,000,000.00 (Fifty Million Rands),

- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At Least 51% black owned	Level Two (125% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature

.....

Date

.....

Commissioner of Oaths

Signature & stamp

APPENDIX D

SWORN AFFIDAVIT – B-BBEE EXEMPTED MICRO ENTERPRISE – GENERAL

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Enterprise Physical Address:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	

Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) who are citizens of the Republic of South Africa by birth or descent; or (b) who became citizens of the Republic of South Africa by naturalisation- i. before 27 April 1994; or ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"
Definition of "Black Designated Groups"	"Black Designated Groups means: (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"

3. I hereby declare under Oath that:

- The Enterprise is _____% Black Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____% Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above:
- Black Youth % = _____%
- Black Disabled % = _____%
- Black Unemployed % = _____%
- Black People living in Rural areas % = _____%
- Black Military Veterans % = _____%
- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____, the annual Total Revenue was R10,000,000.00 (Ten Million Rands) or less
- Please Confirm on the below table the B-BBEE Level Contributor, **by ticking the applicable box.**

100% Black Owned	Level One (135% B-BBEE procurement recognition)	
At least 51% Black Owned	Level Two (125% B-BBEE procurement recognition level)	
Less than 51% Black Owned	Level Four (100% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the Owners of the Enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature

.....

Date

.....

Commissioner of Oaths

Signature & stamp

VENDOR REGISTRATION DOCUMENTS CHECKLIST

Please note that you will have to provide the first two documents on the list (highlighted in red) and the rest will be provided by the supplier:

	Yes	No
1. Complete the "Supplier Declaration Form" (SDF) (commissioned). See attachment.		
2. Complete the "Supplier Code of Conduct" (SCC). See attachment.		
3. Copy of cancelled cheque OR letter from the bank verifying banking details (with bank stamp not older than 3 Months & sign by Bank Teller).		
4. Certified (Not Older than 3 Months) copy of Identity document of Shareholders/Directors/Members (where applicable).		
5. Certified copy of certificate of incorporation, CM29 / CM9 (name change).		
6. Certified copy of share Certificates of Shareholders, CK1 / CK2 (if CC).		
7. A letter with the company's letterhead confirming both Physical and Postal address.		
8. Original or certified copy of SARS Tax Clearance certificate and Vat registration certificate.		
9. BBBEE certificate and detailed scorecard from a SANAS Accredited Verification Agency and/or Sworn Certified Affidavit.		
10. Central Supplier Database (CSD) Summary Registration Report.		



T2.2-29: Insurance provided by the Contractor

T2.2-29: Insurance provided by the *Contractor*

Clause 84.1 in NEC3 Engineering & Construction Contract (June 2005)(amended June 2006 and April 2013) requires that the *Contractor* provides the insurance stated in the insurance table except any insurance which the *Employer* is to provide as stated in the Contract Data.

Please provide the following details for insurance which the *Contractor* is still to provide. Notwithstanding this information all costs related to insurance are deemed included in the tenderer's rates and prices.

Insurance against (See clause 84.2 of the ECC)	Name of Insurance Company	Cover	Premium
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract			
Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger and Unauthorised Passenger Liability indemnity with a minimum indemnity limit of R5 000 000/R10 000 000.			
Insurance in respect of loss of or damage to own property and equipment.			
(Other)			



T2.2-30:

**Form of Intent to Provide a
Performance Guarantee**

T2.2-30: Form of Intent to Provide a Performance Guarantee

It is hereby agreed by the Tenderer that a Performance Guarantee drafted **exactly** as provided in the tender documents will be provided by the Guarantor named below, which is a **bank or insurer registered in South Africa**:

Name of Guarantor
(Bank/Insurer)

Address

The Performance Guarantee shall be provided within **2 (Two)** weeks after the Contract Date defined in the contract unless otherwise agreed to by the parties.

Signed

Name

Capacity

On behalf of (name of
tenderer)

Date

Confirmed by Guarantor's Authorised Representative

Signature(s)

Name (print)

Capacity

On behalf of Guarantor
(Bank/insurer)

Date



T2.2-31:

Forecast Rate of Invoicing



T2.2-31: Forecast Rate of Invoicing

Tenderer to submit the forecast rate of invoicing (cash-flow) based on the Tender Price and Tender Programme.

Index of documentation attached to this schedule:
--



T2.2-32:
**Three (3) years audited financial
statements**

T2.2-32: Three (3) years audited financial statements

Attached to this schedule is the last three (3) years audited financial statements of the single tenderer/members of the Joint Venture.

NAME OF COMPANY/IES and INDEX OF ATTACHMENTS:

.....

.....

.....

.....

.....

.....

.....



T2.2-33 to 34: SPECIFIC GOALS

T2.2-33 to 34: SPECIFIC GOALS

Specific Goals	Number of points (80/20 system)	Number of points (90/10 system)
B-BBEE Status Level of Contributor 1 or 2	4.00	2.00
The promotion of supplier development through subcontracting for a minimum of 30% of the value of a contract to South African companies which are: I. EMEs and/or QSEs black owned	16.00	8.00
Non-compliant and/or Level 3-8 contributors	0.00	0.00
Total number of preference points	20.00	10.00

Specific Goals	Evidence Required
T2.2-33 B-BBEE Status Level of Contributor 1 or 2	B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guidelines
T2.2-34 The promotion of supplier development through subcontracting for a minimum of 30% of the value of a contract to South African companies which are: I. EMEs and/or QSEs black owned	- Sub-contracting agreement(s) - Subcontractors B-BBEE Certificate / Sworn -Affidavit / CIPC B-BBEE Certificate as per DTIC guidelines.

Signed on this _____ day of _____ 20____

NAME	POSITION	SIGNATURE OF TENDER
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T2.2-35: JOB-CREATION SCHEDULE

T2.2-35: JOB-CREATION SCHEDULE

The Government has identified State Owned Enterprises sourcing activities as a key enabler to achieve the National Development Plan (NDP) objective of reducing unemployment from the current baseline of 28% to 6%.

In order to give effect to these job creation objectives, Tenderers are required to provide the following undertaking of new jobs that will be created (either by them or by their subcontractors) should they be awarded this tender.

Tenderers to note, that if successful, any deviations from the Job creation Schedule in the contract phase will be subject to acceptance by the *Project Manager* in terms of the Conditions of Contract. Please also note the applicable Z clauses in Contract Data by *Employer*.

- (a) Please indicate total number of new jobs that will be created over the term of the contract:

Total number and value of new jobs created	Total number of new jobs	Total rand value of new jobs created

- (b) Of the total number of new jobs created, please indicate the number and value of new jobs to be created for the following designated groups:

	Total number of new jobs	Total rand value of new jobs
Black men		
Black women		
Black Youth		
Black people living in rural or underdeveloped areas or townships		
Black People with Disabilities		

- (c) Of the total number of new jobs created, please indicate the number of skilled, semi-skilled and unskilled new jobs that will be created over the term of the contract:

	Total number of Skilled jobs	Total number of Semi-skilled jobs	Total number of Unskilled jobs
Black men			
Black women			
Black Youth			
Black people living in rural or underdeveloped areas or townships			
Black People with Disabilities			
Other			

(d) Please indicate the number of new jobs to be created, broken down per quarter over the term of the contract.

Year 1	Q1	Q2	Q3	Q4
Total number of new jobs				
Number of new jobs for Black men				
Number of new jobs for black women				
Number of new jobs for black youth				
Number of new jobs for black people living in rural or underdeveloped areas or townships				
Number of new jobs for black People with Disabilities				
Number of new jobs for other categories				
Number of new skilled jobs				
Number of new semi-skilled jobs				
Number of new unskilled jobs				

Year 2	Q1	Q2	Q3	Q4
Total number of new jobs				
Number of new jobs for Black men				
Number of new jobs for black women				
Number of new jobs for black youth				
Number of new jobs for black people living in rural or underdeveloped areas or townships				
Number of new jobs for black People with Disabilities				
Number of new jobs for other categories				
Number of new skilled jobs				
Number of new semi-skilled jobs				
Number of new unskilled jobs				



C1.1

Form of Offer and Acceptance



C1.1: Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

REPLACEMENT AND CONSTRUCTION OF THE NEW BULK ELECTRICAL INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS

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

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

The offered total of the Prices exclusive of VAT is	R
Value Added Tax @ 15% is	R
The offered total of the Prices inclusive of VAT is	R
(in words)	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:



Acceptance

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

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Works Information
Part C4	Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any).



Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s)

Name(s)

Capacity

**for the
Employer**

Transnet SOC Ltd

(Insert name and address of organisation)

Name &
signature of
witness

Date



Schedule of Deviations

Note:

1. To be completed by the Employer prior to award of contract. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		
4		
5		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any 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 Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

	For the tenderer:	For the Employer
Signature	_____	_____
Name	_____	_____
Capacity	_____	_____
On behalf of	(Insert name and address of organisation)	Transnet SOC Ltd
Name & signature of witness	_____	_____



C1.2

Contract Data (Part 1&2)

C1.2 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
		B: Priced contract with bill of quantities
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X1: Price adjustment for inflation
		X2 Changes in the law
		X7: Delay damages
		X13: Performance Bond
		X16: Retention
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Engineering and Construction Contract June 2005 (amended June 2006 and April 2013)	
10.1	The <i>Employer</i> is:	Transnet SOC Ltd (Registration No. 1990/000900/30)

	Address	Registered address: Transnet Corporate Centre 138 Eloff Street Braamfontein Johannesburg 2000
	Having elected its Contractual Address for the purposes of this contract as:	Transnet National Ports Authority Port of Cape Town South Arm Road Cape Town 8001
10.1	The <i>Project Manager</i> is: (Name)	TBA.....
	Address	
	Tel	
	e-mail	
10.1	The <i>Supervisor</i> is: (Name)	TBA.....
	Address	
	Tel No.	
	e-mail	
11.2(13)	The <i>works</i> are	Replacement and construction of the new bulk electrical infrastructure at Sturrock Dry Dock for a period of two (2) years for Transnet SOC Ltd.
11.2(14)	The following matters will be included in the Risk Register	• Exposure to Asbestos fibre • Demolishing of Structures. • Offloading of office containers and materials. • Working at elevated position (i.e., Roof Work/ ladders)
11.2(15)	The <i>boundaries of the site</i> are	As stated in Part C4.1." Description of the Site and it surroundings"
11.2(16)	The Site Information is in	Part C4
11.2(19)	The Works Information is in	Part C3

12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.		
13.1	The <i>language of this contract</i> is	English		
13.3	The <i>period for reply</i> is	2 weeks		
2	The <i>Contractor's</i> main responsibilities	No additional data is required for this section of the <i>conditions of contract</i> .		
3	Time			
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	19 January 2028		
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<i>Condition to be met</i>	<i>key date</i>	
		1	Submission of SHE file	Two(2) weeks after contract start date
		2	Starting date	19 January 2026
		3	Completion date	19 January 2028
24	People	The Contractor shall ensure that each key personnel to be submitted to the <i>Project Manager</i> in terms of the requirements of clause 24.1 shall be the same key personnel as submitted with its tender proposal. No replacement personnel shall have any connection to the work unless replaced or employed in terms of Clause 24.		
30.1	The <i>access dates</i> are	Date:	On approval of Contractor's SHE File, DOL Work permit and all applicable HSE requirements (Letter of good standing) and site access certificate	

31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 weeks of the Contract Date.
31.2	The <i>starting date</i> is	19 January 2026
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	2 weeks.
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	
4	Testing and Defects	
42.2	The <i>defects date</i> is	52 (fifty two) weeks after Completion of the whole of the <i>works</i>.
43.2	The <i>defect correction period</i> is	2 weeks
	except that the defect correction period for and related to the disruption of services such as water, sanitation, electricity, telecommunications and other essential services for the operation of the Port.	24 hours (twenty-four) hours
5	Payment	
50.1	The <i>assessment interval</i> is	15th (Fifteenth) day of each successive month.
51.1	The <i>currency of this contract</i> is	South African Rand.
51.2	The period within which payments are made is	Payment will be effected on or before the last day of the month following the month during which a valid Tax Invoice and Statement were received.
51.4	The <i>interest rate</i> is	the prime lending rate of Standard Bank of South Africa.
6	Compensation events	

60.1(13) The *weather measurements* to be recorded for each calendar month are, **the cumulative rainfall (mm)**

Before the Completion Date for the whole of the works and

- **At the place stated in the Contract Data**

The value of which, by comparison with the weather data, is shown to occur on average less frequently than once in ten years.

Only the difference between the weather measurement and weather which the weather data show to occur on average less frequently than once in ten years is taken into account

The place where weather is to be recorded (on the Site) is: **Port of Cape Town - The *Contractor's* Site establishment areas.**

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at: **Cape Town**

and which are available from: **South African Weather Service 012 367 6023 or info3@weathersa.co.za.**

7	Title	No additional data is required for this section of the <i>conditions of contract</i>.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	N/A
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	
	1 Insurance against:	Loss of or damage to the <i>works</i>, Plant and Materials is as stated in the Insurance policy for Contract Works/ Public Liability.

	Cover / indemnity:	to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are:	as stated in the insurance policy for Contract Works / Public Liability
2	Insurance against:	Loss of or damage to property (except the <i>works</i>, Plant and Materials & Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) arising out of or in connection with the performance of the Contract as stated in the insurance policy for Contract Works / Public Liability
	Cover / indemnity	Is to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are	as stated in the insurance policy for Contract Works / Public Liability
3	Insurance against:	Loss of or damage to Equipment (Temporary Works only) as stated in the insurance policy for contract Works and Public Liability
	Cover / indemnity	Is to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are:	As stated in the insurance policy for Contract Works / Public Liability
4	Insurance against:	Contract Works SASRIA insurance subject to the terms, exceptions and conditions of the SASRIA coupon
	Cover / indemnity	Cover / indemnity is to the extent provided by the SASRIA coupon
	The deductibles are	The deductibles are, in respect of each and every theft claim, 0,1% of the contract value subject to a minimum of R2,500 and a maximum of R25,000.

Note:

The deductibles for the insurance as stated above are listed in the document titled "Certificate of Insurance: Transnet (SOC) Limited Principal Controlled Insurance."

84.1

The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract for any one event is

The *Contractor* provides these 1 additional Insurances

The *Contractor* must comply at a minimum with the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 as amended.

- 1 Where the contract requires that the design of any part of the *works* shall be provided by the *Contractor* the *Contractor* shall satisfy the *Employer* that professional indemnity insurance cover in connection therewith has been affected**
- 2 Where the contract involves manufacture, and/or fabrication of Plant & Materials, components or other goods to be incorporated into the *works* at premises other than the site, the *Contractor* shall satisfy the *Employer* that such plant & materials, components or other goods for incorporation in the *works* are adequately insured during manufacture and/or fabrication and transportation to the site.**
- 3 Should the *Employer* have an insurable interest in such items during manufacture, and/or fabrication, such interest shall be noted by endorsement to the *Contractor's* policies of insurance as well as those of any sub-contractor**

-
- 4 Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger and Unauthorised Passenger Liability indemnity with a minimum indemnity limit of R 5 000 000.**
 - 5 Protection and Indemnity Insurance in respect of all marine craft or vessels utilised in performance of the Works extended for Specialist Operations with a minimum indemnity limit of R 20,000,000**
 - 6 The insurance coverage referred to in 1, 2, 3, 4, 5 and 6 above shall be obtained from an insurer(s) in terms of an insurance policy approved by the *Employer*. The *Contractor* shall arrange with the insurer to submit to the *Project Manager* the original and the duplicate original of the policy or policies of insurance and the receipts for payment of current premiums, together with a certificate**

from the insurer or insurance broker concerned, confirming that the policy or policies provide the full coverage as required. The original policy will be returned to the *Contractor*.
-

84.2 The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the works, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract for any one event is

Whatever the *Contractor* requires in addition to the amount of insurance taken out by the *Employer* for the same risk.

84.2	The insurance against loss of or damage to the works, Plant and Materials as stated in the insurance policy for contract works and public liability selected from:	Principal Controlled Insurance policy for Contract OR Project Specific Insurance for the contract
9	Termination	There is no additional Contract Data required for this section of the <i>conditions of contract</i>.
10	Data for main Option clause	
B	Priced contract with Bill of Quantities	No additional data is required for this Option.
60.6	The <i>method of measurement</i> is	The Bill of Quantities have been measured in accordance with SANS 1200 unless indicated otherwise.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	Both parties will agree as and when a dispute arises. If the parties cannot reach an agreement on the <i>Adjudicator</i>, the Chairman of the Association of Arbitrators will appoint an <i>Adjudicator</i>.
W1.2(3)	The <i>Adjudicator nominating body</i> is: If no <i>Adjudicator nominating body</i> is entered, it is:	The Chairman of the Association of Arbitrators (Southern Africa) the Association of Arbitrators (Southern Africa)
W1.4(2)	The <i>tribunal</i> is:	Arbitration
W1.4(5)	The <i>arbitration procedure</i> is	The Rules for the Conduct of Arbitrations of the Association of Arbitrators (Southern Africa)
	The place where arbitration is to be held is	Cape Town, South Africa

The person or organisation
who will choose an arbitrator

- if the Parties cannot agree
a choice or
- if the arbitration procedure
does not state who selects
an arbitrator, is

**The Chairman of the Association of Arbitrators
(Southern Africa)**

12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1.1(a) The *base date* for indices is **September 2025**

X1.1(c) The proportions used to
calculate the Price Adjustment
Factor are:

Pro- portion	linked to index for	Index by	prepared by
0.30	Labour (People) SEIFSA – Table C3	The Labour Table C-3 (Link- https://www.seifsa.co.za/wp-content/uploads/2021/10/Wage-Tables-2021-2024-1)	SEIFSA Indices:
0.13	Plant (Equipment)	The “Plant and Equipment” index in P-2 (Mining and construction plant and equipment price index) of the SEIFSA latest table of indices.	

0.30

**Labour (People)
SEIFSA –
Table C3**

**The
Labour
Table C-3
(Link-
<https://www.seifsa.co.za/wp-content/uploads/2021/10/Wage-Tables-2021-2024-1>)**

**SEIFSA
Indices:**

0.13

**Plant
(Equipment)**

**The “Plant and
Equipment” index
in P-2 (Mining
and construction
plant and
equipment price
index) of the
SEIFSA latest
table of indices.**

		0.08	Material (Civil) SEIFSA – Table E-EX	The “Civil Engineering Material - Total” index in Table 6 (Civil Engineering material price indices) of the SEIFSA table G-3.	
		0.27	Material (Electrical)	The Electrical motor indices SEIFSA table J4 and ruling price of electrical cable manufacturing material table N.	
		0.08	Material (Mechanical)	The Mechanical motor indices SEIFSA table J4 and ruling price of Mechanical manufacturing material table N.	
		0.06	Fuel	The SEIFSA petroleum product index table L-2.	
		0.08	Material (Structural) SEIFSA – Table Q-1(A)	Stainless Corrosion Resisting 3CR12	Steel Steel
		1.00			
		0.15	Non-adjustable		
*Statistical release P0151 – Contract Price Adjustment Provisions (CPAP) Work Group and Selected Materials Indices					
X2	Changes in the law	No additional data is required for this Option			
X7	Delay damages (but not if Option X5 is also used)				

X7.1	Delay damages for Completion of the whole of the <i>works</i> are	R15 900.00 per day
X13	Performance bond	
X13.1	The amount of the performance bond is	5% of the total of the Prices
X16	Retention	
X16.1	The retention free amount is	Nil
	The retention percentage is	10% on all payments certified.
X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	The deductible of the relevant insurance policy And the actual consequential loss
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	The total of the Prices
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to:	The cost of correcting the Defect
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	The Total of the Prices
X18.5	The <i>end of liability date</i> is	5 years after Completion of the whole of the <i>works</i>
Z	<i>Additional conditions of contract</i> are:	

Z4 Additional clause relating to
Performance Bonds and/or
Guarantees

Z4.1

The Performance Guarantee under X13 above shall be an irrevocable, on-demand performance guarantee, to be issued exactly in the form of the Pro Forma documents provided for this purpose under C1.3 (Forms of Securities), in favour of the *Employer* by a financial institution reasonably acceptable to the *Employer*.

Z5 Additional clauses relating to Joint
Venture

Z5.1

Insert the additional core clause 27.5

27.5. In the instance that the *Contractor* is a joint venture, the *Contractor* shall provide the *Employer* with a certified copy of its signed joint venture agreement, and in the instance that the joint venture is an 'Incorporated Joint Venture,' the Memorandum of Incorporation, within 4 (four) weeks of the Contract Date.

The Joint Venture agreement shall contain but not be limited to the following:

- **A brief description of the Contract and the Deliverables;**
- **The name, physical address, communications addresses and domicilium citandi et executandi of each of the constituents and of the Joint Venture;**
- **The constituent's interests;**
- **A schedule of the insurance policies, sureties, indemnities and guarantees which must be taken out by the Joint Venture and by the individual constituents;**
- **Details of an internal dispute resolution procedure;**
- **Written confirmation by all of the constituents:**
 - i. **of their joint and several liabilities to the *Employer* to Provide the Works;**
 - ii. **identification of the lead partner in the joint venture confirming the authority of the lead partner to bind the joint venture through the *Contractor's* representative;**

iii. Identification of the roles and responsibilities of the constituents to provide the Works.

• Financial requirements for the Joint Venture:

iv. the working capital requirements for the Joint Venture and the extent to which and manner whereby this will be provided and/or guaranteed by the constituents from time to time;

v. the names of the auditors and others, if any, who will provide auditing and accounting services to the Joint Venture.

Z5.2

Insert additional core clause 27.6

27.6. The *Contractor* shall not alter its composition or legal status of the Joint Venture without the prior approval of the *Employer*.

Z6 Additional obligations in respect of Termination

Z6.1

The following will be included under core clause 91.1:

In the second main bullet, after the word 'partnership' add 'joint venture whether incorporate or otherwise (including any constituent of the joint venture)' and

Under the second main bullet, insert the following additional bullets after the last sub-bullet:

- commenced business rescue proceedings (R22)
- repudiated this Contract (R23)

Z6.2	Termination Table	The following will be included under core clause 90.2 Termination Table as follows: Amend "A reason other than R1 – R21" to "A reason other than R1 – R23"
Z7	Right Reserved by the <i>Employer</i> to Conduct Vetting through SSA	
Z7.1		The <i>Employer</i> reserves the right to conduct vetting through State Security Agency (SSA) for security clearances of any <i>Contractor</i> who has access to National Key Points for the following without limitations: 1. Confidential – this clearance is based on any information which may be used by malicious, opposing or hostile elements to harm the objectives and functions of an organ of state. 2. Secret – clearance is based on any information which may be used by malicious, opposing or hostile elements to disrupt the objectives and functions of an organ of state. 3. Top Secret – this clearance is based on information which may be used by malicious, opposing or hostile elements to neutralise the objectives and functions of an organ of state.
Z8	Additional Clause Relating to Collusion in the Construction Industry	
Z8.1		The contract award is made without prejudice to any rights the <i>Employer</i> may have to take appropriate action later with regard to any declared tender rigging including blacklisting.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

The tendering *Contractor* is advised to read both the NEC3 Engineering and Construction Contract - June 2005 (with amendments June 2006 and April 2013) and the relevant parts of its Guidance Notes (ECC3-GN) in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 Guidance Notes.

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name):	
	Address	
	Tel No.	
	Fax No.	
11.2(8)	The <i>direct fee percentage</i> is	%
	The <i>subcontracted fee percentage</i> is	%
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: (Where this schedule is inadequate, the tenderer shall supplement this schedule with an attachment.) All key personnel submitted with T2.2-04 for Technical Evaluation shall be captured in this Contract Data Part 2.	
	1 Name:	
	Job:	
	Responsibilities:	
	Qualifications:	
	Experience:	
	2 Name:	
	Job	

	Responsibilities:	
	Qualifications:	
	Experience:	
		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled .
11.2(14)	The following matters will be included in the Risk Register	
31.1	The programme identified in the Contract Data is	
B	Priced contract with bill of quantities	
11.2(21)	The <i>bill of quantities</i> is in	
11.2(31)	The tendered total of the Prices is	(in figures) (in words), excluding VAT
	Data for Schedules of Cost Components	<i>Note "SCC" means Schedule of Cost Components starting on page 60 of ECC, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC.</i>

B	Priced contract with bill of quantities	Data for the Shorter Schedule of Cost Components		
41 in SSCC	The percentage for people overheads is:	%		
21 in SSCC	The published list of Equipment is the last edition of the list published by			
	The percentage for adjustment for Equipment in the published list is	% (state plus or minus)		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate

61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are	Category of employee		Hourly rate
62 in SSCC	The percentage for design overheads is	%		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			



C2.1

Pricing Instructions



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PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option B	4
C2.2	The <i>bill of quantities</i>	68
	Total number of pages	72



C2.1 Pricing instructions: Option B

1. The conditions of contract

1.1. How the contract prices work and assesses it for progress payments

Clause 11 in NEC3 Engineering and Construction Contract, June 2005 (ECC3) Option B states:

Identified and defined terms	11	(21) The Bill of Quantities is the <i>bill of quantities</i> as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.
	11.2	(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.
		(28) The Price for Work Done to Date is the total of - the quantity of the work which the <i>Contractor</i> has completed for each item in the Bill of Quantities multiplied by the rate and - a proportion of each lump sum which is the proportion of the work covered by the item which the <i>Contractor</i> has completed.
		Completed work is work without Defects which would either delay or be covered by immediately following work.
		(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

1.2. Function of the Bill of Quantities

Clause 55.1 in Option B states, "Information in the Bill of Quantities is not Works Information or Site Information". This confirms that instructions to do work or how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

1.3. Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract (June 2005) Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

Historically bill of quantities-based contracts in South Africa have been influenced by the different approaches of the civil engineering and building sectors of the industry through their respective discipline based standard forms of contract and methods of measurement. This is particularly apparent in the approach to the Preliminary and General bill. On the other hand, because ECC3 caters for a number of disciplines in the same contract, including electrical works, a different approach not currently found in local methods of measurement to the Preliminary & General bill items may have been used.

The NEC approach to the P & G bill assumes use will be made of method related charges for Equipment applied to Providing the Works based on durations shown in the Accepted Programme, fixed charges for the use of Equipment that is required throughout the construction phase, time related charges for people working in a supervisory capacity for the period required, and lump sum charges for other facilities or

services not directly related to performing work items typically included in other parts of the bill.

2. Measurement and payment

2.1. Symbols

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ² -pass	square metre pass
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
Prov sum ¹	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

2.2. General assumptions

- 2.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.

¹ Provisional Sums should not be used unless absolutely unavoidable. Rather include specifications and associated bill items for the most likely scope of work, and then change later using the compensation event procedure if necessary. This is because tenderers cannot programme effectively for unknown scopes of work



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- 2.2.2. The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.
- 2.2.3. Clause 63.13 in Option B provides that these rates and Prices may be used as a basis for assessment of compensation events instead of Defined Cost.
- 2.2.4. Where this contract requires detailed drawings, designs or other information to be provided, and no rates or prices are included in the *bill* specifically for such matters, then the *Contractor* is deemed to have allowed for all costs associated with such requirements within the tendered rates and Prices in the Bill of Quantities.
- 2.2.5. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*. If a number of items are grouped together for pricing purposes, this will be treated as a single lump sum.
- 2.2.6. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due and not the quantities given in the Bill of Quantities.
- 2.2.7. The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. More detail regarding the extent of the work entailed under each item is provided in the Works Information.



C2.2

Bill of Quantities



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C2.2 Bill of Quantities

Item	Description	Unit	Quantity	Unit Rate	Total Amount
1	SECTION NO. 1: PRELIMINARIES AND GENERAL BILL NO.1: PRELIMINARIES AND GENERAL PREAMBLES The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill General Carting away of excavated material Descriptions of carting away excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stockpiles situated on the building site Tenderers are referred to the SANS Payment reference documents for the full intent and meaning of each clause thereof, which are herein after referred to by clause number and heading only TEMPORARY BARRIERS, SCREENS, ETC Temporary barriers, screens, etc. including removal and reuse: Welded galvanized mesh fencing 100x 100, 1.8m high including minimum 70% green shade cloth comprising of 2m bitumen gum-poles imbedded 200mm deep including all required concrete footings. Pole spacing to be 3m c/c including stays, straining wire and all required fixings complete. Note: The pricing of fencing will be deemed to include the removal refixing at position to be identified by the Architect after initial use.				
	1.1	m	175		
	Total carried forward				



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	Total brought forward				
	FIXED CHARGE ITEMS				
1.2	Contractual requirements	Sum	1		
1.3	Port Permits and Site Access, Hot works permits and any other required permits for the works	Sum	1		
1.4	Establishment of Facilities on the Site	Sum	1		
1.5	Supply and install electrical connection on site camp	Sum	1		
1.6	Supply and install a water connection to site camp	Sum	1		
1.7	Removal of site establishment.	Sum	1		
1.8	Rehabilitation of site	Sum	1		
1.9	Compilation and provision to the Employer of all as-built documentation and any other associated contract documentation, including but not limited to hard copy as built drawings, operations and maintenance where applicable	Sum	1		
1.10	Contractors should have provisions for revising any existing designs deemed necessary during the construction process. It allows for adjustments, modifications, or complete redesigns to ensure compliance with project requirements, building codes, and client preferences, to also accommodate unforeseen changes or improvements that may arise during construction	Sum	1		
1.11	Conduct necessary site investigation for construction inclusive but not limited to under services detection.	Sum	1		
1.12	Allowance for identifying the cable routing for supplying pumps and the main cables that supply the proposed substation and detailed Design for Cabling and Trenching	Sum	1		
1.13	Procurement of cabling and installation	Sum	1		
1.14	Allowance for calculations of protection settings (protection study); integration of new substation into existing electrical infrastructure; perform and ensure proper grading and coordination; install and testing of the protection and complete with other associated systems	Sum	1		
1.15	Allowance for detailed design, supply and installation of transformer oil spillage/oil containment system	Sum	1		
	Total carried forward				



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	Total brought forward				
	TIME RELATED ITEMS				
1.16	Company and head office overhead costs for duration of construction.	monthly	24		
1.17	On site staff	monthly	24		
1.18	Supervision for the duration of the project.	monthly	24		
1.19	Accommodation for site employees	monthly	24		
1.20	Plant and Machinery hire	monthly	24		
1.21	Lockable site office for the use of Employer's staff (minimum size 3m x 5m) including the following services: Daily cleaning, 230V AC power, telecommunication facilities, office furniture (minimum 4 x workstations), printing, copying and computer facilities, IT infrastructure, document - binding, storing and laminating facilities. Item includes the provision of a local based Document Controller administrative on site	monthly	24		
1.22	Ablution and latrine facilities	monthly	24		
1.23	Provision of water and electricity	monthly	24		
1.24	Tools and Equipment	monthly	24		
1.25	On site security to protect the contractor's assets	monthly	24		
1.26	Cost for compliance to Health and Safety regulation	monthly	24		
1.27	Cost for compliance with Environmental Management Plan	monthly	24		
1.28	Cost for compliance with Quality Management Plan	monthly	24		
BILL TOTAL CARRIED TO FINAL SUMMARY					

Item	Description	Unit	Quantity	Unit Rate	Total Amount
	SECTION 2: SITE CLEARANCE (SANS 1200 C)				
	BILL NO.2: EXTERNAL WORKS				
2	DISMANTLE AND DEMOLISH STRUCTURES				
	Inclusive of all haulage and dumping trees:				
2.1	Demolish and remove structures, reinforced and unreinforced concrete and brickwork, including bollards, benches, planters, dustbins, etc.	Sum	1		
2.2	Cart materials and debris to unspecified sites and dump (provisional)	km	1		
	REMOVE AND DISPOSE PAVEMENTS				
2.3	Demolish existing pavements and discard materials to an approved dumping site to be located by the Contractor, including all haulage and dumping fees: (PSC 8.2.11)				
	a) Remove and dispose existing paving (various types for walkways and driveways) along Works area	m ²	46		
	b) Remove and dispose of unreinforced concrete along works area (channels, edge beams, edging around fixtures, etc.)	m ²	152		
	c) Remove and dispose of existing asphalt paved surfaces up to 80mm thick (average) along Works area (from roadway for new pavement works and excavations for new drainage and sleeves)	m ²	57		
	d) Remove and dispose of kerbs etc. (all types precast and cast-insitu) deemed to be in poor condition	m	42		
	e) Excavate carefully, lift, recover and reinstate water pipes. (Excavation and backfilling measured elsewhere). (8.2.7 PSL)	m	38		
	Total carried forward				

[illegible]

	Total brought forward				
4	TREATMENT OF ROAD-BED				
4.1	Road-bed preparation and compaction of in-situ G8 material compacted to 90% Mod. AASHTO maximum density. (8.3.3(a))				
	a) For roadways etc.	m ³	141		
	EARTHWORKS				
	Cut to fill (8.3.4)				
4.2	Compact to 90 % mod. AASHTO maximum density	m ³	56		
	Borrow to fill (8.3.4)				
4.	Selected layer compacted to 93% mod. AASHTO maximum density. G7 material commercially sourced by the Contractor. (8.3.5)	m ³	141		
	Extra-over for excavating and breaking down material in: (8.3.6)				
4.5	Hard excavation	m ³	37		
	Cut to spoil from (8.3.7)				
4.6	Soft excavation	m ³	74		
4.7	Removal of oversize material (8.3.8)	m ³	34		
	SUNDRIES (SANS 1200 DM)				
4.8	Extra-over for temporary stockpiling of G7 material. (8.3.11)	m ³	38		
	OVERHAUL (8.3.12)				
4.9	Extra-over for hauling material in excess of the haul of 1,0 km	km	108		
	Total carried forward				



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	Total brought forward				
	EXCAVATION (1200 D)				
5.1	Excavate all materials for trenches and backfill, compact, and dispose of surplus/unsuitable material within 100m from excavation (PSD)				
	a) For electrical ducts/culverts, including crossing streets. Exceeding 0,5 m but not exceeding 1,0 m. (8.3.3)	m ³	739		
	Extra-over for excavation items in (prov):				
5.2	Soft material (no intermediate material, all material not classified as hard will be considered as soft material)	m ³	74		
5.3	Hard rock material (using jack hammers only, no blasting allowed)	m ³	37		
	EXCAVATION ANCILLARIES				
	Make up deficiency in backfill material (Provisional)				
5.4	from other necessary excavations on site. (8.3.3.1(a))	m ³	52		
5.5	by importation from commercial or off-site sources selected by the Contractor. (8.3.3.1(c))	m ³	52		
5.6	Shore trenching. (8.3.4)	m	62		
5.7	Keeping excavations free of water from other subterrain	Sum	1		
	Control water inflow from excavations				
5.8	Provide equipment	Sum	1		
5.9	Operate and maintain	Days	12		
5.10	Remove equipment	Sum	1		
	Total carried forward				



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	Total brought forward				
	SUMS STATED PROVISIONALLY BY ENGINEER (1200 C)				
5.11	For work to be done by a nominated sub-contractor				
	a) Flat sawing, vertical core drilling and wire sawing inclusive of the provision of support/jacking of existing structures (8.5)	Sum	1		
	b) Overheads, charges and profit on item above	%	1		
5.12	BOX CULVERTS (PRECAST CONCRETE) Supply, bed and install (including heavy duty joint sealing between sections). (SANS 1200 LE)				
	a) complete with inverted precast slabs				
5.13	1.5m x 1.2m	m	32		
5.14	MANHOLES Construct complete with covers and frames. (8.2.8)				
	a) Type 1500mm diameter, Dwg No TNPA/2020-CE-006 5,0 m deep	No	2		
	ACCESSORIES. (8.2.10)				
5.15	Step Irons	No	17		
5.16	Supports at tunnel interface	No	2		
5.17	REINSTATE ROAD SURFACES COMPLETE WITH ALL COURSES. (SANS 1200 C)				
	a) Complete with all courses except surfacing, only where trenches are crossing existing surfaced roads, and no other layer works is required. 150mm G2 material with 3% Emulsion and 1% Cement. (8.3.6)	m ³	141		
	b) Bitumen premix 40mm thick	m ²	799		
5.18	OVERHAUL (provisional) where ordered	km	65		
	Total carried forward				

	Total brought forward				
	CONCRETE				
6.1	Strength concrete: 15 MPa/19mm 50mm minimum thickness	m ³	12		
	Strength concrete: 15 MPa/19mm				
6.2	Infill Surround	m ³	66		
	Strength concrete: 40 MPa/19mm with rapid-hardening cement				
6.3	Deck Slab	m ³	41		
6.4	Stormwater channels	m ³	16		
	FORMWORK				
	Smooth vertical plane to:				
6.5	Sides	m ²	101		
6.6	Vertical narrow widths up to 300 mm wide.	m	16		
	Box out holes/form voids				
	Small, circular up to 0,35 m diam.: depths over and up to				
6.7	1,0 m -1,5 m	No	2		
	REINFORCEMENT				
	High-tensile welded mesh reinforcement				
6.8	Type reference 245 in standard sheets	m ²	288		
	UNFORMED SURFACE FINISHES				
6.9	Power-floated finish	m ²	171		
	JOINTS (8.5)				
	Two-part gey polysulphide sealing compound including backing cord, bond beaker, primer etc.				
6.10	3 x 40mm saw cut joints in deck slab	m	54		
	Total carried forward				



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	Total brought forward				
6.11	10mm softboard with closed cell expanded polyethelene or bitumen Expansion/Construction joints in deck slab SEWERS (SANS 1200) CLEAR SITE	m	46		
6.12	Dismantle and remove pipelines (not encased in concrete) SUNDRIES (1200 LD)	m	22		
6.13	Permanent plug stoppers	No	10		
6.14	Raising or lowering of existing manholes	No	9		
	SUB(BASE) (SANS 1200ME) SUB(BASE) Construct gravel subbase with G5 material from commercial sources including all haulage and temporary stockpiling of materials (where required)				
6.15	200mm compacted to 95% mod. AASHTO to roadways	m ³	175		
	BASE (SANS 1200 MFL) Construct crushed stone base with G2 material (3% emulsion and 1% cement) from commercial source including all haulage and temporary stockpiling of materials (where required)				
6.16	150mm compacted to 98% mod. AASHTO to roadways	m ³	141		
	ASPHALT BASE AND SURFACING (SANS 1200 MH) PRIME COAT Prime coat using:				
6.17	MC 30 cut back bitumen	Litres	574		
	Total carried forward				



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	Total brought forward				
	TACK COAT				
	Spray surface using emulsion				
6.18	30% stable grade emulsion	Litres	574		
	ASPHALT BASE				
	Continuously graded asphalt base				
6.19	Course asphalt, using 80/100 penetration grade bitumen	Tons	3		
	ASPHALT SURFACING				
	Continuously graded surfacing				
6.20	Medium asphalt, using 80/100 penetration grade bitumen	Tons	3		
	SECTION: ANCILLARY ROADWORKS (SANS 1200MM)				
	PERMANENT TRAFFIC SIGNS				
	Sign faces with painted or galvanized (as stated) background. Symbols, characters, legend, and borders in engineering grade retroreflective material with signboards constructed from. (8.3.1) traffic sign				
6.21	a) Chroma deck SABS approved (1.4 mm thick), of area over 2 m2	m ²	6		
6.22	Sign Supports (PSMM 8.3.3)				
	a) Steel tubing D shape 76mm OD with 2mm wall thickness galvanized.	m	18		
	b) Excavation for sign supports and backfilling with in-situ material	m ³	2		
	Total carried forward				



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	Total brought forward				
6.23	ROAD MARKINGS Two-part Cold plastic paint (1.2mm thick), reflective using glass beads a) White lines (broken or unbroken) (width 100 mm) b) Yellow lines (broken or unbroken) (width 150 mm) c) White characters and symbols d) Yellow characters and symbols e) Setting out and pre-marking of lines (excluding traffic island markings, characters, and symbols) f) Removal of existing road markings by sandblasting. (PSMM 8.6) g) Extra-over for item a) for backfill using 15Mpa concrete.	m m m ² m ² m m ² m ³	1150 100 120 60 1750 220 16		
6.24	STREET FURNITURE Provide and install complete as per Dwg. No. TNPA/2020- CE-001 a) High Impact Bollards:150mm dia. galvanized steel bollard, length 1500 mm filled in with concrete, complete with 500mm x 500mm x 550mm deep concrete foundation b) Removable Bollards:150mm dia. flat top stain steel bollard, length 1200 mm, complete with 500mm x 500mm x 550mm deep concrete foundation	No No	16 62		
BILL-TOTAL CARRIED TO FINAL SUMMARY					



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Item	Description	Unit	Quantity	Unit Rate	Total Amount
7	SECTION 7: EARTHWORKS BILL NO.7: EARTHWORKS PREAMBLES The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill SUPPLEMENTARY PREAMBLES View site Before submitting his tender, the contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the Contract Sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained General Carting away of excavated material Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stockpiles situated on the building site				

7.1	Demolition of existing brick structures				
	Completely breakdown and remove existing brick structures size (4.5 x 15m). Including the demolition of substructure components and dispose to a site identified by the contractor. All safe environmental protocols to be adhered to.	No	1		
7.2	Demolition of existing brick structures				
	Completely breakdown and remove existing brick structures size (3.5 x 3.5m). Including the demolition of substructure components and dispose to a site identified by the employer. All safe environmental protocols to be adhered to.	No	1		
7.3	SITE CLEARANCE ETC				
	Site clearance				
7.4	Digging up and removing rubbish, debris, vegetation, hedges, shrubs, bush, etc. and trees not exceeding 200mm girth	m ²	1080		
	EXCAVATION				
7.5	Excavation on earth not exceeding 2m deep				
	Trenches	m ³	439		
7.6	Extra over bulk excavations in earth for excavation in				
	Hard rock	m ³	152		
7.7	Extra over all excavations for carting away				
	Total carried forward				



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	Total brought forward				
7.6	Surplus material from excavations and/or stockpiles on site, to a dumping site to be located by the contractor	m ³	222		
	Risk of collapse of excavations				
7.7	Sides of trench and hole excavations exceeding 1,5m deep	m ²	860		
7.8	Keeping excavations free of water				
7.9	Keeping excavations free of all water other than subterranean water	No	34		
	FILLING ETC OTHER THAN BULK				
	Earth filling obtained from the excavations and/or prescribed stockpiles on site, compacted to 95% Mod AASHTO density.				
7.10	Under floors, steps, paving, etc.	m ³	24		
7.11	Backfilling to trenches, holes, etc.	m ³	277		
	Hardcore filling comprising of G5 compacted in 150mm layers to 95% Mod AASHTO				
7.12	Under floors etc. (in accordance with SANS 1200 ME; 8.3.3)	m ³	171		
	Prescribed density tests on filling				
7.13	Modified AASHTO Density test	No	16		
	Soil Poisoning				
7.14	Approved brand of anti-termite soil poison applied by a Registered Pest Control company and guaranteed against termite infestation for ten years:	m ²	1080		
7.15	To bottoms and sides of trenches etc.	m ²	916		
	BILL- TOTAL CARRIED TO SUMMARY				

Item	Description	Unit	Quantity	Unit Rate	Total Amount
8	SECTION 8: CONCRETE BILL NO.8: CONCRETE, FORMWORK AND REINFORCEMENT PREAMBLES The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill SUPPLEMENTARY PREAMBLES Cost of tests The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SANS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Engineer. The testing shall be undertaken by an independent firm or institution nominated by the Contractor with the approval of the Engineer (Test cubes are measured separately) Formwork Descriptions of formwork shall be deemed to include use and waste only (except were described as left in or permanent), for fitting together in the required forms, wedging, plumbing, and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use				

	Formwork to sides of bases, pile caps, ground beams, etc., have been measured provisionally and will only be paid for where it is specifically prescribed by the Project Manager for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks				
8.1	15MPa/19mm concrete (SANS 1200 G)				
8.1.1	Surface blinding under surface beds	m ³	3		
8.1.2	Surface blinding under footings and bases	m ³	12		
8.2	REINFORCED CONCRETE CAST ON/IN FORMWORK				
	40MPa/19mm concrete (SANS 1200 G)				
8.2.1	Strip footings	m ³	112		
8.2.2	Ramps	m ³	22		
8.2.3	Slabs and beams	m ³	134		
8.2.4	Walls	m ³	15		
8.2.5	Concrete infills	m ³	22		
Total carried forward					

	Total brought forward				
8.3	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES 40MP/19mm concrete (SANS 1200 G)				
8.3.1	Surface beds	m ³	59		
8.3.2	Square Columns	m ³	17		
8.4	TEST CUBES				
8.4.1	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional) (Set of 6)	No	32		
8.5	CONCRETE SUNDRIES				
	Finishing top surfaces of concrete smooth with a power float				
8.5.1	Surface beds, slabs, etc.	m ²	758		
	Total carried forward				

	Total brought forward				
	ROUGH AND SMOOTH FORMWORK (DEGREE OF ACCURACY III)				
9	Smooth formwork to sides				
9.1	Slabs	m ²	43		
9.2	Ramps	m ²	11		
9.3	Square Columns	m ²	32		
	Smooth formwork to sides and soffits				
9.4	Slabs propped up exceeding 1.5m and not exceeding 3.5m high	m ²	435		
9.5	Beams	m ²	123		
9.6	MOVEMENT JOINTS ETC				
	Expansion joints with bitumen impregnated softboard between vertical and brick surfaces.				
9.6.1	10mm soft board or similar at surface bed wall joints.	m	177		
	Saw cut joints and contrition joints				
9.6.2	3 x 40mm saw cut joints in top of concrete	m	67		
9.7	REINFORCEMENT (CPAP WORK GROUP NO. 114)				
	High tensile steel reinforcement to structural concrete work				
9.7.1	Various Diameter bars. (All in accordance with engineers' details)	Tons	27		
	Fabric reinforcement				
9.7.2	Type 245 fabric reinforcement in concrete surface beds etc.	m ²	519		
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10	SECTION 10: MASONRY BILL NO.10: MASONRY PREAMBLES For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard. SUPPLEMENTARY PREAMBLES BRICKWORK Sizes in descriptions Sizes in descriptions Where sizes in descriptions are given in brick units, 'one brick' shall represent the length and 'half brick' the width of a brick Bagged and sealed walls Face bricks Bricks shall be ordered timeously to obtain uniformity in size and colour. BRICKWORK BRICKWORK IN FOUNDATIONS (PROVISIONAL) (LIC) Brickwork of NFX bricks (14 MPa nominal compressive strength) in class II mortar 10.1 One brick wall BRICKWORK IN SUPERSTRUCTURE (LIC) Brickwork of NFP bricks in class II mortar				
	Total carried forward				

	Total brought forward				
10.2	280mm cavity walls with wall ties.	m ²	5735		
10.3	Half brick walls in beamfilling	m ²	50		
	BRICKWORK SUNDRIES				
	Sundries				
	Bagging 1:3 cement and sand mixture (LIC)				
10.4	On brick walls, piers, etc.	m ²	5799		
	2,5mm Brickwork reinforcement				
10.5	150mm Wide reinforcement built in horizontally	m	3590		
	Prestressed fabricated concrete lintels including necessary temporary supports				
10.6	110 X 75mm Lintels in lengths not exceeding 3m	m	54		
	Turning pieces to lintels etc.				
10.7	110mm Wide turning pieces	m	54		
	Air bricks etc.				
10.8	229 x 152mm Clay vermin proof air brick	No	24		
	FACE BRICKWORK				
	280 mm FBS face bricks pointed with recessed horizontal and vertical joints				
10.9	Extra over hollow brickwork for face brickwork with wire ties	m ²	441		
	Total carried forward				

	Total brought forward				
	Preparation of concrete floor beds, slabs, etc. for paving. Concrete surfaces shall be hacked (preferably by mechanical means) until all laitance, dirt, oil, etc. is dislodged and swept clean of all loose matter. Surfaces shall then be wetted and kept damp for at least six hours before slushing with 1:2 cement/sand and while still wet, paving, etc. shall be laid on a 1:4 cement mortar bed not exceeding 25mm thick and jointed and pointed with hollowed joints. Sand shall be clean, sharp river sand Paving of 500 x 500 x 50mm thick precast concrete paving blocks with butt joints on 20mm thick river sand bed with sand-and-cement mixture swept into joints and hosed down, including preparation of ground or filling				
10.10	Paving in stretcher bond to falls	m ²	527		
BILL TOTAL CARRIED TO FINAL SUMMARY					

Item	Description	Unit	Quantity	Unit Rate	Total Amount
11	BILL NO.11: WATERPROOFING PREAMBLES The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill DAMPPROOFING OF WALLS AND FLOORS One layer 375-micron embossed polyethylene dampproof course (SANS 952-1985 type B)				
11.1	In walls One layer 250-micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape	m ²	65		
11.2	Under surface beds SEALING STRIPS, JOINT SEALANTS, ETC Two-part grey polysulphide sealing compound including backing cord, bond breaker, primer, etc.	m ²	323		
11.3	6 x 10mm in saw cut joints in floors WATERPROOFING TO ROOFS, BASEMENTS, ETC	m	52		
11.4	One-layer Derbigum CG3 and one-layer Derbigum CG4H (Horticultural) waterproofing membrane, with 100mm side laps with 150mm end laps, sealed to be primed surfaces by 'torch-fusion' followed by 150-micron polythene sheeting loose laid with 50mm laps sealed with pressure sensitive tape, to receive drainage layer of Delta MS20 to horizontal surfaces, to receive soil and plants (elsewhere specified). Waterproofing to be installed by an approved Derbigum Contractor.	m ²	435		
	BILL TOTAL CARRIED TO FINAL SUMMARY				

Item	Description	Unit	Quantity	Unit Rate	Total Amount
12	SECTION 12: CARPENTRY AND JOINERY				
	BILL NO.12: CARPENTRY AND JOINERY				
	PREAMBLES				
	The contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill				
	TIMBER DOORS, WINDOWS, ETC				
	Solid hardwood 2-hour fire rated door with purpose made solid hardwood door frame				
	Fire doors are generally available in Class A (1 hour fire rating) and Class B (2-hour fire rating)				
12.1	Door for opening 920mm x 2100 mm high fixed to brickwork.	No	6		
	BILL TOTAL CARRIED TO SUMMARY				



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Item	Description	Unit	Quantity	Unit Rate	Total Amount
13	SECTION 13: IRONMONGERY BILL NO.13: IRON MONGERY PREAMBLES The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill HINGES, BOLTS, ETC. Dorma' or equally approved 13.1 100 x 75mm ball bearing stainless steel butt hinges. CATCHES, CABIN HOOKS, ETC. LOCKS Dorma' or equally approved 13.2 50mm brass padlock. 13.3 5 lever mortice locksets with strike plate included. HANDLES Dorma' or equally approved 13.4 19mm diameter x 64 x 130mm straight tubular pull handle DOOR CLOSERS Dorma' or equally approved 13.5 TS 83 Heavy-duty overhead door closer with PA bracket. LETTERS, NAMEPLATES, ETC. Dorma' or equally approved 13.6 Perspex plate with engraved and painted letters or numerals	No	30		
		No	16		
		No	10		
		No	7		
		No	4		
		No	18		
	Total carried forward				



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	Total brought forward				
13.7	SUNDRIES Dorma' or equally approved 38mm Diameter rubber door stops.	No	6		
BILL TOTAL CARRIED TO FINAL SUMMARY					

Item	Description	Unit	Quantity	Unit Rate	Total Amount
14	SECTION 14: METAL WORK				
	BILL NO.15: METAL WORK				
	SUPPLEMENTARY PREAMBLES				
	The Contractor is referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill.				
14.1	ALUMINIUM WINDOWS, DOORS, ETC. (CPAP WORK GROUP NO. 140)				
	Purpose made aluminium horizontal-slatted door, complete with subframes, ironmongery, etc. and fixing to brickwork or concrete				
14.1	Door size 933 x 2100mm high	No	4		
14.2	STEEL ROLLER SHUTTERS ETC				
	High aluminium roller shutters with dust-free tracks				
14.2	Chain operated slatted roller shutter for 3680 x 2975 mm high opening fixed to brickwork complete.	No	8		
BILL-TOTAL CARRIEED TO FINAL SUMMARY					

Item	Description	Unit	Quantity	Unit Rate	Total Amount
15	SECTION 15: PLASTERING				
	BILL NO.15: PLASTERING				
	SUPPLEMENTARY PREAMBLES				
	The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill				
15.1	SCREEDS				
	20mm Thick on floors and landings	m ²	323		
	INTERNAL PLASTER				
	Cement plaster steel trowelled, on brickwork				
15.2	On walls	m ²	858		
15.3	On narrow widths not exceeding 300mm wide	m ²	8		
15.4	Cement plaster steel trowelled, on concrete				
	On ceilings	m ²	322		
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Item	Description	Unit	Quantity	Unit Rate	Total Amount
	SECTION 16: PLUMBING AND DRAINAGE				
16	BILL NO.16: PLUMBING AND DRAINAGE				
	SUPPLEMENTARY PREAMBLES				
	The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill				
	RAINWATER DISPOSAL				
	0,6mm Seamless aluminum gutters and rainwater pipes				
16.1	100mm x 75mm rainwater downpipes	m	22		
16.2	Extra over for full-bore outlet for 100mm pipe	No	6		
16.3	Extra over rainwater pipe for bend	No	12		
16.4	Extra over rainwater pipe for shoe	No	6		
16.5	Extra over rainwater pipe for eaves or plinth offset	No	6		
16.6	Extra over rainwater pipe for swan-neck	No	12		
	Total carried forward				



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	Total brought forward				
	FIRE APPLIANCES ETC				
	Hose reels, etc.				
16.7	4.5kg dry chemical powder fire extinguisher	No	8		
16.8	100mm diameter fire hydrant	No	2		
16.9	100mm diameter non-return valve	No	2		
16.10	100mm diameter isolation valve	No	2		
	Fire hydrant pedestals				
16.11	Unreinforced concrete hydrant pedestal 900mm high, cast around vertical pipe with bottom 300mm below ground, 300 x 300mm square at base and tapering to 200 x 200mm overall octagonal shaped top, including excavation, formwork and two coats of paint to exposed surfaces	No	2		
	Testing				
16.12	Testing fire water pipe system	Item	1		
	STORMWATER DRAINAGE (CPAP WORK GROUP NO. 146)				
	Cast iron gratings, covers, etc.				
16.13	2400 x 1200mm mentis grating and frame	No	40		
	Budgetary Allowance:				
	Provisional Sums:				
16.14	Removal of the existing sewer	Sum	1		
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Item	Description	Unit	Quantity	Unit Rate	Total Amount
	SECTION 17: ELECTRICAL WORK				
	BILL NO.17: ELECTRICAL WORK				
17	ELECTRICAL WORK				
	PREAMBLES				
	The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill				
	Proposed new Sturrock Dry Dock Substation Equipment				
17.1	Verify the current designs, design, Supply, Delivery of 12kV, 1250A, IAC B FALR 31.5 kA 1s VCB incomer panels switchboard, comprising of protection relays, Current and voltage transformers as per Drawings No: TNPA/2020-000-E-EL-0002 Sheet 001, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0007 Sheet 001-6, Datasheet no: TNPA/2020-000-E-DS-0002 and Specification No: TNPA/2020-000-E-SPC-0002.	Sum	1		
17.2	Installation of specified item above.	Sum	1		
17.3	Verify the current designs, design, Supply, Delivery of 12kV, 1250A, IAC B FALR 31.5 kA 1s, Bus-Section Panel, comprising of Current and voltage transformers as per Drawings No: TNPA/2020-000-E-EL-0002 Sheet 001, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0006 Sheet 001-6, Datasheet no: TNPA/2020-000-E-DS-0002 and Specification No: TNPA/2020-000-E-SPC-0002.	Sum	1		
17.4	Installation of specified item above.	Sum	1		
17.5	Verify the current designs, design, Supply, Delivery of 12kV, 630A, IAC B FALR 31.5 kA 1s, Feeder Panel, comprising of Current and voltage transformers as per Drawings No: TNPA/2020-000-E-EL-0002 Sheet 001, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0004, 5 & 8, Datasheet no: TNPA/2020-000-E-DS-0002 and Specification No: TNPA/2020-000-E-SPC-0002.	Sum	1		
17.6	Installation of specified item above.	Sum	1		
17.7	Verify the current designs, design, Supply, Delivery of 12kV, 630A, IAC B FALR 31.5 kA 1s, Feeder Panel, comprising of Current and voltage transformers as per Drawings No: TNPA/2020-000-E-EL-0002 Sheet 001, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0004, 5 & 8, Datasheet no: TNPA/2020-000-E-DS-0002 and Specification No: TNPA/2020-000-E-SPC-0002.	Sum	1		
17.8	Installation of specified item above.	Sum	1		
	Total carried forward				



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	Total brought forward				
17.9	Verify the current designs, design, Supply, Delivery of 110VDC, 8-hour Ah rate of 22Ah, Battery Tripping Unit (BTU) as Datasheet No: TNPA/2020-000-E-DS-0006	Sum	1		
17.10	Installation of specified item above.	Sum	1		
17.11	Verify the current designs, design, Supply, Delivery of 7.2kV, 1250A, IAC B FALR 31.5 kA 1s, Incomer Panel as per specification and Drawings No: TNPA/2020-000-E-EL-0002, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0002 Sheet 001-6, Datasheet no: TNPA/2020-000-E-DS-0001 and Specification No: TNPA/2020-000-E-SPC-0003	Sum	1		
17.12	Installation of specified item above.	Sum	1		
17.13	Verify the current designs, design, Supply, Delivery of 7.2kV, 1250A, IAC B FALR 31.5 kA 1s, Bus-section as per specification and Drawings No: TNPA/2020-000-E-EL-0002, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0001 Sheet 001, Datasheet no: TNPA/2020-000-E-DS-0001 and Specification No: TNPA/2020-000-E-SPC-0003	Sum	1		
17.14	Installation of specified item above.	Sum	1		
17.15	Verify the current designs, design, Supply, Delivery of 7.2kV, 630A, IAC B FALR 31.5 kA 1s, 3.3kV Motor Feeder Panel as per specification and Drawings No: TNPA/2020-000-E-EL-0002, TNPA/2020-000-E-SLD-0002 Sheet 001 and TNPA/2020-000-E-MSCH-0003 Sheet 001-5, Datasheet no: TNPA/2020-000-E-DS-0001 and Specification No: TNPA/2020-000-E-SPC-0003	Sum	1		
17.16	Installation of specified item above.	Sum	1		
17.17	Verify the current designs, design, Supply, Delivery of 7.2kV, 630A, IAC B FALR 31.5 kA 1s, Spare Feeder Panel, as per specification and Drawings No: TNPA/2020-000-E-EL-0002, TNPA/2020-000-E-SLD-0002 and TNPA/2020-000-E-MSCH-0002 Sheet 001-6, Datasheet no: TNPA/2020-000-E-DS-0001 and Specification No: TNPA/2020-000-E-SPC-0003	Sum	1		
17.18	Installation of specified item above.	Sum	1		
	Sturrock Dry Dock Substation 5MVA, 11kV/3.3kV transformer				
17.19	Verify the current designs, design, Supply, Delivery of 5MVA 11.75kV/3.3kV, ONAN Indoor type, 3 phase 50Hz transformers including all cable termination boxes, testing and commissioning etc., as per datasheet No: TNPA/2020-000-E-DS-0004 and Specification No: TNPA/2020-000-E-SPC-0002	Sum	1		
17.20	Installation of specified item above.	Sum	1		
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	Total brought forward				
	Sturrock Dry Dock Substation 3MVA, 11kV/400V transformer				
17.21	Verify the current design, design, Supply, Delivery of 3MVA 11.75kV/400V, ONAN Indoor type, 3 phase 50Hz transformers including all cable termination boxes, testing and commissioning etc., as per datasheet No: TNPA/2020-000-E-DS-0004 and Specification No: TNPA/2020-000-E-SPC-0002	Sum	1		
17.22	Installation of specified item above.	Sum	1		
	Low Voltage Distribution Board				
17.23	Verify the current design, design, Supply, Delivery of 400V panels comprising of all switchgear/circuit breakers and associated equipment as per specification No: TNPA/2020-000-E-SPC-0001, Datasheet No: TNPA/2020-000-E-DS-0005 and Drawings No: TNPA/2020-000-E-EL-0001, TNPA/2020-000-E-SLD-0001 Sheet 001 and TNPA/2020-000-E-LSCH-0001 -23 Sheet 001	Sum	1		
17.24	Installation of specified item above.	Sum	1		
17.25	Verify the current design, design, Supply, Delivery of Graving Dock LT Board comprising of all switchgear/circuit breakers and associated equipment as per Drawings No: TNPA/2020-000-E-GDB-0001 Sheet 001-2	Sum	1		
17.26	Installation of specified item above.	Sum	1		
17.27	Verify the current design, design, Supply, Delivery of Pumphouse LV Board comprising of all switchgear/circuit breakers and associated equipment as per Drawings No: TNPA/2020-000-E-PDB-0001 Sheet 001-2	Sum	1		
17.28	Installation of specified item above.	Sum	1		
17.29	Verify the current design, design, Supply, Delivery of New Sturrock Dry Dock DB comprising of all switchgear/circuit breakers and associated equipment as per Drawing No: TNPA/2020-000-E-LSP-0001 Sheet 001-5	Sum	1		
17.30	Installation of specified item above.	Sum	1		
	Medium Voltage cable				
17.31	Verify the current design, design, Supply, Delivery of 240mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded ,galvanized steel wire armored and PVC sheathed from 11.75kV Switchgear Busbar to 5MVA,11,75/3,3kV Transformer as per drawing no: TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.32	Installation of specified item above.	Sum	1		
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	Total brought forward				
17.33	Verify the current design, design, Supply, Delivery of 95mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded ,galvanized steel wire armored and PVC sheathed from 11.75kV Switchgear Busbar to 3MVA, 11,75/3,3kV Transformers as per drawing no: TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.34	Installation of specified item above.	Sum	1		
17.35	Verify the current design, design, Supply, Delivery of 630mm ² single core , 12.7/15kV XLPE insulated, copper tape screened, PVC bedded ,galvanized steel wire armored and PVC sheathed from 5MVA, 11,75/3,3kV Transformers (3,3kV side) to 3.3kV Switchgear as per drawing no: TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.36	Installation of specified item above.	Sum	1		
17.37	Verify the current design, design, Supply, Delivery of 95mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded ,galvanized steel wire armored and PVC sheathed from 11.75kV Switchgear Busbar to MISPLON 200kVA, 11,75kV/400V MINISUB as per drawing no: TNPA/2020-000-E-CR-0002 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.38	Installation of specified item above.	Sum	1		
17.39	Verify the current design, design, Supply, Delivery of 95mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded ,galvanized steel wire armored and PVC sheathed from 3.3kV Switchgear Busbar to 1.4MW, 3.3kV, 0.9pf Motors as per drawing no: TNPA/2020-000-E-CR-0002 Sheet 001 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.40	Installation of specified item above.	Sum	1		
	Medium Voltage Cable termination				
17.41	Supply and delivery of EN50181 termination kits for 240mm ² , 3 core 12.7/15KV XLPE insulated, copper tape screened, and PVC sheathed at the proposed new Sturrock Dry Dock 11.75kV panel as per drawing number TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002.	Sum	1		
17.42	Installation of specified item above.	Sum	1		
	Total carried forward				



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	Total brought forward				
17.43	Supply and delivery of EN50181 termination kits for 150mm ² , 3 core 12.7/15KV XLPE insulated, copper tape screened, and PVC sheathed at the proposed new Sturrock Dry Dock 11.75kV panel as per drawing number TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002.	Sum	1		
17.44	Installation of specified item above.	Sum	1		
17.45	Supply and delivery of EN50181 termination kits for 95mm ² , 3 core 12.7/15KV XLPE insulated, copper tape screened, and PVC sheathed at the proposed new Sturrock Dry Dock 11.75kV panel as per drawing number TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002.	Sum	1		
17.46	Installation of specified item above.	Sum	1		
17.47	Supply and delivery of EN50181 termination kits for 630mm ² , single core 12.7/15KV XLPE insulated, copper tape screened, and PVC sheathed at the proposed new Sturrock Dry Dock 11.75kV panel as per drawing number TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002.	Sum	1		
17.48	Installation of specified item above.	Sum	1		
	Medium Voltage Cable Joints				
17.49	Supply and Delivery for cable joining at the Graving Dock Substation for 150mm ² PILC from Harbor Main Substation and 150mm ² XLPE ,3 core cables from proposed new Sturrock Dry Dock Substation in compliance to SANS 1332 as per drawing No: TNPA/2020-000-E-CR-0002 Sheet 001.	Sum	1		
17.50	Installation of specified item above. Joints to be conducted by a certified medium voltage cable joiner.	Sum	1		
17.51	Supply and Delivery for cable joining at the Graving Dock Substation for 150mm ² PILC from Unity Substation and 150mm ² XLPE ,3 core cables from proposed new Sturrock Dry Dock Substation in compliance to SANS 1332 as per drawing No: TNPA/2020-000-E-CR-0002 Sheet 001.	Sum	1		
17.52	Installation of specified item above. Joints to be conducted by a certified medium voltage cable joiner.	Sum	1		
17.53	Supply and Delivery for cable joining at the Graving Dock Substation for 95mm ² PILC from MISPLON 200kVA, 11,75kV/400V as per drawing No: TNPA/2020-000-E-CR-0002 Sheet 001.	Sum	1		
17.54	Installation of specified item above. Joints to be conducted by a certified medium voltage cable joiner.	Sum	1		
	Total carried forward				

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	Total brought forward				
17.55	Verify the current design, design, Supply, Delivery of 150mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded, galvanized steel wire armored, and PVC sheeted from Harbor Main Substation to proposed new Sturrock Dry Dock substation as per drawing no. TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.56	Installation of specified item above. Joints to be conducted by a certified medium voltage cable joiner.	Sum	1		
17.57	Supply and Delivery of copper tape screened, PVC bedded, galvanized steel wire armored, and PVC sheeted from Unity Substation to proposed new Sturrock Dry Dock substation as per drawing no: TNPA/2020-000-E-CR-0003 Sheet 001-3 and TNPA/2020-000-E-SLD-0002 and Electrical Cable Schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.58	Installation of specified item above. Joints to be conducted by a certified medium voltage cable joiner.	Sum	1		
	Cable Clamps				
17.59	Supply and Delivery of cable Clamps 316 stainless steel for 240mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded, galvanized steel wire armored and PVC sheet equal or similar approved to o-line.	Sum	1		
17.60	Installation of specified item above.	Sum	1		
17.61	Supply and delivery of cable Clamps 316 stainless steel for 150mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded, galvanized steel wire armored and PVC sheet equal or similar approved to o-line	Sum	1		
17.62	Installation of specified item above.	Sum	1		
17.63	Supply and delivery of cable Clamps 316 stainless steel for 95mm ² , 3 core, 12.7/15kV XLPE insulated, copper tape screened, PVC bedded, galvanized steel wire armored and PVC sheet equal or similar approved to o-line	Sum	1		
17.64	Installation of specified item above.	Sum	1		
17.65	Supply and delivery of cable Clamps 316 stainless steel for 630mm ² , single core 12.7/15KV XLPE insulated, copper tape screened, and PVC sheathed equal or similar approved to o-line	Sum	1		
17.66	Installation of specified item above.	Sum	1		
	Total carried forward				



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	Total brought forward				
	Low Voltage Cable				
17.67	Verify the current design, design, Supply, Delivery of new 630mm ² , single core armoured PVC insulated PVC sheathed 600/1000v cable from 3MVA, 11,75/0.4kV Transformer 1(400V side) to 400V MCC Busbar as per drawing no. TNPA/2020-000-E-CR-0001 Sheet 003 Sheet 001-3, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.68	Installation of specified item above.	Sum	1		
17.69	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PUMPHOUSE FEEDER 1 to LV Board as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 Sheet 001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.70	Installation of specified item above.	Sum	1		
17.71	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PUMPHOUSE FEEDER 2 to LV Board as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.72	Installation of specified item above.	Sum	1		
17.73	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to 20 Ton CAPSTAN STARBOARD SIDE 1-2-3 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.74	Installation of specified item above.	Sum	1		
17.75	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to 20 Ton CAPSTAN STARBOARD SIDE 4 - 5- & 7Ton CAPSTAN STARBOARD SIDE 1-2 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.76	Installation of specified item above.	Sum	1		
17.77	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000v cable 400V MCC Busbar to 20 Ton CAPSTAN PORT SIDE 6-7 & 7Ton CAPSTAN PORT SIDE 1-2 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.78	Installation of specified item above.	Sum	1		
	Total carried forward				



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	Total brought forward				
17.79	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to 20 Ton CAPSTAN PORT SIDE 8-9-10 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.80	Installation of specified item above.	Sum	1		
17.81	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PLINTHBOX STARBOARD SIDE 1-2-3 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.82	Installation of specified item above.	Sum	1		
17.83	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PLINTHBOX STARBOARD SIDE 4-5 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.84	Installation of specified item above.	Sum	1		
17.85	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PLINTHBOX PORT SIDE 6-7 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.86	Installation of specified item above.	Sum	1		
17.87	Verify the current design, design, Supply, Delivery of new 300mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PLINTHBOX PORT SIDE 8-9-10 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.88	Installation of specified item above.	Sum	1		
17.89	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to HAULAGE CHAMBER 1 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.90	Installation of specified item above.	Sum	1		
17.91	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to HAULAGE CHAMBER 2 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
	Total carried forward				



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	Total brought forward				
17.92	Installation of specified item above.	Sum	1		
17.93	Verify the current design, design, Supply, Delivery of new 150mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to SERVEST FEEDER as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.94	Installation of specified item above.	Sum	1		
17.95	Verify the current design, design, Supply, Delivery of new 95mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to GRAVING DOCK LV BOARD as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.96	Installation of specified item above.	Sum	1		
17.97	Verify the current design, design, Supply, Delivery of new 95mm ² , 3 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to PUMPHOUSE LV BOARD as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.98	Installation of specified item above.	Sum	1		
17.99	Verify the current design, design, Supply, Delivery of new 25mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to NEW SDD SUBSTATION SUB DB as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.100	Installation of specified item above.	Sum	1		
17.101	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to CRANES SUPPLY STARBOARD SIDE 1-2-3 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.102	Installation of specified item above.	Sum	1		
17.103	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to CRANES SUPPLY STARBOARD SIDE 4-5-6 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.104	installation of specified item above.	Sum	1		
17.105	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to CRANES SUPPLY PORT SIDE 7-8-9 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
	Total carried forward				



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	Total brought forward				
17.106	Installation of specified item above.	Sum	1		
17.107	Verify the current design, design, Supply, Delivery of new 240mm ² , 4 core armoured PVC insulated PVC sheathed 600/1000V cable 400V MCC Busbar to CRANES SUPPLY PORT SIDE 10-11-12 as per drawing no: TNPA/2020-000-E-CR-0001, TNPA/2020-000-E-SLD-0001 and electrical cable schedule No: TNPA/2020-000-E-CS-0001	Sum	1		
17.108	Installation of specified item above.	Sum	1		
	Cable Support System				
17.109	Verify the current design, design, Supply, Delivery of heavy duty cable ladder system heavy duty, 1000mm hot-dip galvanised Steel to SANS 121 ISO 1461 including fittings and accessories(4 way piece, 90° internal bend, staggered cantilever, 90° external bend and Tee piece etc.) equal or similar approved to o-line as per drawing No: TNPA/2020-000-E-CR-0001 and TNPA/2020-000-E-CR-0002 as well as any other racking over and above. the typical design deemed necessary by the cable support system designer.	Sum	1		
17.110	Installation of specified item above.	Sum	1		
17.111	Verify the current design, design, Supply, Delivery of heavy duty cable ladder system heavy duty, 300mm hot-dip galvanised Steel to SANS 121 ISO 1461 including fittings and accessories(4 way piece, 90° internal bend, staggered cantilever, 90° external bend and Tee piece etc.) equal or similar approved to o-line as per drawing No: TNPA/2020-000-E-CR-0001 and TNPA/2020-000-E-CR-0002 as well as any other racking over and above. the typical design deemed necessary by the cable support system designer.	Sum	1		
17.112	Installation of specified item above.	Sum	1		
17.113	Verify the current design, design, Supply, Delivery of heavy duty cable ladder system heavy duty, 200mm hot-dip galvanised Steel to SANS 121 ISO 1461 including fittings and accessories(4 way piece, 90° internal bend, staggered cantilever, 90° external bend and Tee piece etc.) equal or similar approved to o-line as per drawing No: TNPA/2020-000-E-CR-0001 and TNPA/2020-000-E-CR-0002 as well as any other racking over and above. the typical design deemed necessary by the cable support system designer.	Sum	1		
17.114	Installation of specified item above.	Sum	1		
	Scada Ancillary Works				
17.115	Inter-wiring of relays for Scada communication within switchboards	Sum	1		
	Networking Equipment				
17.116	Supply and delivery of Managed ethernet switches 6 Port for Control Room as per drawing No: TNPA/2020-000-E-STM-0001	Sum	1		
	Total carried forward				



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	Total brought forward				
17.117	Installation of specified item above.	Sum	1		
17.118	Supply and delivery of Managed ethernet switches 6 Port for MV board as per drawing No: TNPA/2020-000-E-STM-0001	Sum	1		
17.119	Installation of specified item above.	Sum	1		
17.120	Supply and delivery of Managed ethernet switches 24 Port, LV board as per drawing No: TNPA/2020-000-E-STM-0001	Sum	1		
17.121	Installation of specified item above.	Sum	1		
17.122	Supply and delivery of Fibre optic Equipment as per system design. Includes patch panels, splice trays, pigtails and all ancillary components (excl FO cabling) as per drawing No: TNPA/2020-000-E-STM-0001	Sum	1		
17.123	Installation of specified item above.	Sum	1		
17.124	Network Testing.	Sum	1		
	Industrial Network Cables				
17.125	Supply and delivery of Cat 6E STP Ethernet Cable as per drawing No: TNPA/2020-000-E-STM-0001	Sum	1		
17.126	Installation of specified item above.	Sum	1		
17.127	Supply and delivery of Armoured Multimode Fibre Optic cable 8-core as per drawing No: TNPA/2020-000-E-STM-0001	Sum	1		
17.128	Installation of specified item above.	Sum	1		
	Cable Marking and Labelling				
17.129	Labelling of Cables	Sum	1		
	Energy Meters				
17.130	Energy Meters.	Sum	1		
17.131	Communication modules for Energy Meters.	Sum	1		
17.132	Installation of specified items above.	Sum	1		
	SCADA System				
17.133	Supply and delivery of SCADA Software, Historian and Remote View SCADA Licenses.	Sum	1		
	Total carried forward				



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	Total brought forward				
17.134	SCADA Development	Sum	1		
17.135	Computer Workstation complete with all accessories for Control room (SCADA PC)	Sum	1		
17.136	Supply and delivery Industrial Touch Panel PC	Sum	1		
17.137	Supply and delivery of 12U, 19" rack cabinet for all network and computer equipment	Sum	1		
17.138	SCADA computer UPS	Sum	1		
17.139	Supply and delivery of DIN Power Supply 24V, 120W	Sum	1		
17.140	Supply and delivery of other network accessories necessary for a complete SCADA system	Sum	1		
17.141	Supply and delivery of Control Room Workstation furniture	Sum	1		
	Telemetry				
17.142	Supply and delivery of Data Radio, Antenna Kit, Industrial RTU and Industrial Cellular Gateway as per datasheet No: TNPA/2020-000-E-DS-0009 and drawing No: TNPA/2020-E-SMT-0001	Sum	1		
17.143	Installation of specified item above.	Sum	1		
	Earthing and Lightning protection				
17.144	Supply, delivery and Installation of earthing and lightning protection by specialist including compliance certificate according to the drawing No: TNPA/2020-000-E-ELPS-0001	Sum	1		
17.145	UPS 1500VA, 230V	Sum	1		
	SUBSTATION ELECTRICAL LIGHTING AND POWER				
	Lighting				
17.146	Verify the current design, design, Supply, Delivery y of BEKA Bulkhead 36W LED or Equivalent, complete with necessary accessories as per Drawing No: TNPA/2020-000-E-LSP-0001 and datasheet No: TNPA/2020-000-E-DS-0007	Sum	1		
17.147	Installation of specified item above.	Sum	1		
	Total carried forward				



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	Total brought forward				
17.148	Verify the current design, design, Supply, Delivery of BEKA Vapourline 4ft 46W Surface Mounted or Equivalent complete with necessary accessories as per Drawing No: TNPA/2020-000-E-LSP-0001 and datasheet No: TNPA/2020-000-E-DS-0007	Sum	1		
17.149	Installation of specified item above.	Sum	1		
17.150	Verify the current design, design, Supply, Delivery of BEKA Vapourline 4ft 46W Surface Mounted or Equivalent (emergency fitting) complete with necessary accessories as per Drawing No: TNPA/2020-000-E-LSP-0001 and datasheet No: TNPA/2020-000-E-DS-0007	Sum	1		
17.151	Installation of specified item above.	Sum	1		
17.152	Verify the current design, design, Supply, Delivery of BEKA Vapourline 4ft 46W Flameproof Exd Surface Mounted or Equivalent complete with necessary accessories as per Drawing No: TNPA/2020-000-E-LSP-0001 and datasheet No: TNPA/2020-000-E-DS-0007	Sum	1		
17.153	Installation of specified item above.	Sum	1		
17.154	Verify the current design, design, Supply, Delivery of BEKA Vapourline 4ft 46W Flameproof Exd Surface Mounted or Equivalent (emergency fitting) complete with necessary accessories as per Drawing No: TNPA/2020-000-E-LSP-0001 and datasheet No: TNPA/2020-000-E-DS-0007	Sum	1		
17.155	Installation of specified item above.	Sum	1		
	Power				
17.156	Verify the current design, design, Supply, Delivery of 16A double socket outlet as per Drawing No: TNPA/2020-000-E-LSP-0001	Sum	1		
17.157	Installation of specified item above.	Sum	1		
	Switch Disconnecter				
17.158	Equal or similar approved to Legrand 30A 3 phase weatherproof isolator	Sum	1		
17.159	Installation of specified item above.	Sum	1		
	Switches				
17.160	Verify the current design, design, Supply, Delivery of 16A two-way single lever light switch as per Drawing No: TNPA/2020-000-E-LSP-0001	Sum	1		
17.161	Installation of specified item above.	Sum	1		
	Total carried forward				



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	Total brought forward				
17.162	Verify the current design, design, Supply, Delivery of 16A intermediate lever light switch as per Drawing No: TNPA/2020-000-E-LSP-0001	Sum	1		
17.163	Installation of specified item above.	Sum	1		
17.164	Verify the current design, design, Supply, Delivery of 16A weatherproof lever light switch as per Drawing No: TNPA/2020-000-E-LSP-0001	Sum	1		
17.165	Installation of specified item above.	Sum	1		
17.166	Verify the current design, design, Supply, Delivery of Day/night switch as per Drawing No: TNPA/2020-000-E-LSP-0001	Sum	1		
17.167	Installation of specified item above.	Sum	1		
	Wiring				
17.168	Verify the current design, design, Supply, Delivery of Low Voltage 2.5 mm² stranded house wiring for internal wiring - Twin and Earth PVC insulated wire as per Drawing No: TNPA/2020-000-E-LSP-0001	Sum	1		
17.169	Installation of specified item above.	Sum	1		
	PVC products, sleeves and conduit accessories				
17.170	Supply and delivery of 20mm PVC conduit	Sum	1		
17.171	Installation of specified items above.	Sum	1		
17.172	Supply and delivery of 20mm Diameter PVC conduit boxes, couplers, adapters, tees and other accessories	Sum	1		
17.173	Installation of specified item above.	Sum	1		
	Dismantling and Disposal				
17.174	Allow for all the costs and expenses in connection with the dismantling and dispose of existing Kiosk complete in Berrio Kiosk	Sum	1		
17.175	Excavate and set excavated material aside for re-use as filling for cable or sleeve trench not exceeding 1m deep for Berrio Kiosk cables into the new Sturrock Dry Dock Substation	Sum	1		
	Miscellaneous Substation Items/Equipment				
17.176	Tool Rack (Wall mounted) External remote racking device (Rating (kV): 15 and Control Voltage: 220V AC)	Sum	1		
17.177	Wooden Substation Desk.	Sum	1		
	Total carried forward				

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	Total brought forward				
17.178	Substation Key Rack (wooden key rack to accommodate 10 keys with glass window).	sum	1		
17.179	General signage in substation (SANS 1186-1:2011 "Standard signs and general requirements".)	Item	1		
	Testing and Commissioning				
17.180	FAT and SAT Attendance by Independent Certified Protection Engineer.	Item	1		
17.181	Grading of protection relays by specialist protection engineer.	Item	1		
17.182	Commissioning of switchgear (11.75kV, 3.3kV and 400V MCC) by specialist commissioning engineer.	Item	1		
17.183	Issue of certificate for Lightning and Surge protection in according with SANS 162305-2	Item	1		
17.184	Allowance for VLF tests by a certified/qualified specialist.	Item	1		
BILL-TOTAL CARRIED TO FINAL SUMMARY					

Item	Description	Unit	Quantity	Unit Rate	Total Amount
18	SECTION 18: FIRE PROTECTION BILL NO.18: MECHANICAL WORK SUPPLEMENTARY PREAMBLES The Contractor is Referred to the relevant Clauses in the separate document Model Preambles for Trades (2008 Edition) and to the Supplementary Preambles which are incorporated in this Bill FIRE SYMBOLS, SUPPRESSION AND DETECTION Supply, deliver and install the following fire protection system, complete with fire extinguishers, hose reel, and all related signage, brackets, supports and all necessary accessories, as per the manufacturer's recommendations. Fire symbols (SANS 1186) FIRE PROTECTION SANS 10139,50054-7, EN 54 Supply, install, test and commissioning <u>GAS FIRE SUPPRESSION AND DETECTION SYSTEM</u> FIRE SUPPRESSION AND DETECTION SYSTEM FOR SERVICE ROOM SMOKE DETECTOR: CEILING ROOMS SANS 10139, 50054-7, EN 54 Approved Smoke Detector White Polycarbonate, LED Emitting Red Light,17-28V DC, -20 to +60 degrees Celsius. SOUNDER: SANS 10139, E54-3 TYPE B Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.				
18.1	Approved Smoke Detector White Polycarbonate, LED Emitting Red Light,17-28V DC, -20 to +60 degrees Celsius.	No	3		
18.2	Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.	No	1		
	Total carried forward				



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	Total brought forward				
18.3	MANUAL CALL POINT SANS 50054-11 (TYPE A), EN 54 Approved Manual Call Point Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, -20 to +60 degrees Celsius	No	1		
18.4	FIRE CONTROL PANEL: SANS 10400 T; EN54 - 2, EN54 - 4, EN54 - 13 Approved 1-4 Loop Fire Control Panel, IP30 rated, with batteries as per SANS requirements and attached technical specifications.	No	1		
18.5	Approved 10kg Carbon Dioxide Fire Extinguisher including trolley and hose and horn, with fire cupboard as per SANS requirements and attached technical specifications.	No	1		
18.6	PH30 Fire Resistant Cable	m	72		
18.7	25mm Conduit	m	65		
	FIRE SUPPRESSION SYSTEM FOR 400 V MCC & CONTROL ROOM				
	FK-5-1-12 Fire Suppression System consisting of the following:				
18.8	Class A & C fires (MCC Room), 280.415943 m3, size 180 L, 121 kg (GC3)	No	2		
18.9	Ceiling Nozzle 180 Degrees.	No	1		
18.10	Trench Nozzle 180 Degrees	No	1		
18.11	Sets of warning signs	No.	3		
18.12	Steel Piping Schedule 40, as per manufacturer computer program required sizes	sum	1		
18.13	All accessories, items or fittings required for the correct operation of the plant, pipework or systems as per the standards and manufacturers' recommendations for the OEM chosen. This should include but not be limited to pipe supports, dirt traps, door caution plates, etc.	sum	1		
	Total carried forward				



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	Total brought forward				
18.14	Support brackets, electrical actuator and all other components required for each cylinder as per manufacturers recommendations.	sum	2		
18.15	Approved Pressure Relief Vents, with wall liner, and fixed weather louvre, which shall comply with EWCL5 and BS EN1634-1, as per drawing locations	No	2		
	FIRE DETECTION SYSTEM FOR 400 V MCC & CONTROL ROOM				
	FK-5-1-12 Fire Detection System consisting of the following:				
	SMOKE DETECTOR: CEILING ROOMS SANS 10139, 50054-7, EN 54				
18.16	Approved Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	6		
	VOID SMOKE DTECTOR: TRENCH SANS 10139, 50054-7, EN 54				
18.17	Approved Void Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	3		
	MANUAL CALL POINT SANS 50054-11 (TYPE A), EN 54				
18.18	Approved Manual Call Point Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, -20 to +60 degrees Celsius.	No	1		
	SOUNDER: SANS 10139, E54-3 TYPE B				
18.19	Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.	No	1		
	Total carried forward				



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	Total brought forward				
	EXTINGUISHER CONTROL/ RELEASE PANEL:				
	SANS 10400 T, EN54-2, EN12094-1				
18.20	Approved Extinguisher Control/ Release Panel, with Batteries as per extras, Volume 120dB(A)LED Emitting Red Light, 230 V	No	1		
	EXTINGUISHER STATUS UNIT:				
	SANS 10400 T, EN54-2, EN54-4, EN54-13				
18.21	Approved Extinguisher Status Unit with Batteries as per as extras, extinguishing status unit type, model, 21 to 30 V DC	No	4		
	STROBE LIGHT:				
	SANS 10139, EN54-23 W VAD				
18.22	Approved Visual Alarm Device (Strobe Light) with Deckhead mounting box, open area VAD CAT. W model, 17 to 28 DC	No	2		
18.23	PH30 Fire Resistant Cable	m	72		
18.24	25mm Conduit	m	65		
	MV SWITCHGEAR ROOM				
	FK-5-1-12 Fire Suppression System consisting of the following:				
18.25	Class A & C fires (MV Room), 248.893245 m3, size 150 L, 107 kg (GC2)	No	4		
18.26	Ceiling Nozzle 180 Degrees.	No	2		
18.27	Trench Nozzle 180 Degrees	No	2		
18.28	Sets of warning signs	No	3		
18.29	Steel Piping Schedule 40, as per manufacturer computer program required sizes	sum	1		
18.30	All accessories, items or fittings required for the correct operation of the plant, pipework or systems as per the standards and manufacturers' recommendations for the OEM chosen. This should include but not be limited to pipe supports, dirt traps, door caution plates, etc.	sum	1		
	Total carried forward				



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	Total brought forward				
18.31	Support brackets, electrical actuator and all other components required for each cylinder as per manufacturer's recommendations.	sum	4		
18.32	Approved Pressure Relief Vents, with wall liner, and fixed weather louvre, which shall comply with EWCL5 and BS EN1634-1, as per drawing locations	No	2		
	MV SWITCHGEAR ROOM				
	FK-5-1-12 Fire Detection System consisting of the following:				
	SMOKE DETECTOR: CEILING ROOMS				
18.33	Approved Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	6		
	VOID SMOKE DETECTOR: TRENCH				
	SANS 10139, 50054-7, EN 54				
18.34	Approved Void Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	7		
	MANUAL CALL POINT				
	SANS 50054-11 (TYPE A), EN 54				
18.35	Approved Manual Call Point Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, -20 to +60 degrees Celsius.	No	1		
	SOUNDER:				
	SANS 10139, E54-3 TYPE B				
18.36	Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.	No	1		
	EXTINGUISHER CONTROL/ RELEASE PANEL:				
	SANS 10400 T, EN54-2, EN12094-1				
18.37	Approved Extinguisher Control/ Release Panel, K11031M2 with Batteries as per as extras, Volume 120dB(A)LED Emitting Red Light, 230 V	No	1		
	Total carried forward				



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	Total brought forward				
	EXTINGUISHER STATUS UNIT: SANS 10400 T, EN54-2, EN54-4, EN54-13				
18.38	Approved Extinguisher Status Unit with Batteries as per as extras, extinguishing status unit type, 21 to 30 V DC	No	3		
	STROBE LIGHT: SANS 10139, EN54-23 W VAD				
18.39	Approved Visual Alarm Device (Strobe Light) with Deckhead mounting box, open area VAD CAT. W model, 17 to 28 DC	No	2		
18.40	PH30 Fire Resistant Cable	m	72		
18.41	25mm Conduit	m	65		
	TRANSFORMER ROOM 1				
	FK-5-1-12 Fire Suppression System consisting of the following:				
18.42	Class A & C fires (Transformer Room 1), 248.893245 m3, size 180 L, 82 kg (GC1)	No	2		
18.43	Ceiling Nozzle 180 Degrees.	No	1		
18.44	Trench Nozzle 180 Degrees	No	1		
18.45	Sets of warning signs	No	3		
18.46	Steel Piping Schedule 40, as per manufacturer computer program required sizes	sum	1		
18.47	All accessories, items or fittings required for the correct operation of the plant, pipework or systems as per the standards and manufacturers' recommendations for the OEM chosen. This should include but not be limited to pipe supports, dirt traps, door caution plates, etc.	sum	1		
18.48	Support brackets, electrical actuator and all other components required for each cylinder as per manufacturer's recommendations.	sum	2		
18.49	Approved Pressure Relief Vents, with wall liner, and fixed weather louvre, which shall comply with EWCL5 and BS EN1634-1, as per drawing locations	No	1		
	Total carried forward				



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	Total brought forward				
	FK-5-1-12 Fire Detection System consisting of the following:				
	SMOKE DETECTOR: CEILING ROOMS SANS 10139, 50054-7, EN 54				
18.50	Apollo or similar Approved Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, - 20 to +60 degrees Celsius.	No	4		
	VOID SMOKE DETECTOR: TRENCH SANS 10139, 50054-7, EN 54				
18.51	Apollo or similar Approved Void Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, - 20 to +60 degrees Celsius.	No	3		
	MANUAL CALL POINT SANS 50054-11 (TYPE A), EN 54				
18.52	Apollo or similar Approved Manual Call Point-Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, - 20 to +60 degrees Celsius.	No	1		
	SOUNDER: SANS 10139, E54-3 TYPE B				
18.53	Nexus or other accepted Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10-60 V DC, -25 to +70 degrees Celsius.	No	1		
	EXTINGUISHER CONTROL/ RELEASE PANEL: SANS 10400 T, EN54-2, EN12094-1				
18.54	Sigma or similar Approved Extinguisher Control/ Release Panel, K11031M2 with Batteries as per as extras, Volume 120dB(A)LED Emitting Red Light, 230 V	No	1		
	EXTINGUISHER STATUS UNIT: SANS 10400 T, EN54-2, EN54-4, EN54-13				
18.55	Sigma or similar Approved Extinguisher Status Unit with Batteries as per as extras, extinguishing status unit type, 21 to 30 V DC	No	3		
	Total carried forward				



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	Total brought forward				
	STROBE LIGHT: SANS 10139, EN54-23 W VAD				
18.56	Nexus or similar Approved Visual Alarm Device (Strobe Light) with Deckhead mounting box, open area VAD CAT. W model, 17 to 28 DC	No	1		
18.57	PH30 Fire Resistant Cable	m	72		
18.58	25mm Conduit	m	65		
	TRANSFORMER ROOM 2				
	FK-5-1-12 Fire Suppression System consisting of the following:				
18.59	Class A & C fires (Transformer Room 2), 180.594468 m3, size 180 L, 82 kg (GC1)	No	2		
18.60	Ceiling Nozzle 180 Degrees.	No	1		
18.61	Trench Nozzle 180 Degrees	No	1		
18.62	Sets of warning signs	No	3		
18.63	Steel Piping Schedule 40, as per manufacturer computer program required sizes	sum	1		
18.64	All accessories, items or fittings required for the correct operation of the plant, pipework or systems as per the standards and manufacturers' recommendations for the OEM chosen. This should include but not be limited to pipe supports, dirt traps, door caution plates, etc.	sum	1		
18.65	Support brackets, electrical actuator and all other components required for each cylinder as per manufacturer's recommendations.	sum	2		
18.66	Approved Pressure Relief Vents, with wall liner, and fixed weather louvre, which shall comply with EWCL5 and BS EN1634-1, as per drawing locations	No	1		
	FK-5-1-12 Fire Detection System consisting of the following:				
	SMOKE DETECTOR: CEILING ROOMS SANS 10139, 50054-7, EN 54				
18.67	Approved Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	4		
	Total carried forward				

	Total brought forward				
18.68	VOID SMOKE DETECTOR: TRENCH SANS 10139, 50054-7, EN 54 Approved Void Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	3		
18.69	MANUAL CALL POINT SANS 50054-11 (TYPE A), EN 54 Approved Manual Call Point Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, -20 to +60 degrees Celsius.	No	1		
18.70	SOUNDER: SANS 10139, E54-3 TYPE B Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.	No	1		
18.71	EXTINGUISHER CONTROL/ RELEASE PANEL: SANS 10400 T, EN54-2, EN12094-1 Approved Extinguisher Control/ Release Panel, K11031M2 with Batteries as per as extras, Volume 120dB(A)LED Emitting Red Light, 230 V	No	1		
18.72	EXTINGUISHER STATUS UNIT: SANS 10400 T, EN54-2, EN54-4, EN54-13 Approved Extinguisher Status Unit with Batteries as per as extras, extinguishing status unit type, 21 to 30 V DC	No	3		
18.73	STROBE LIGHT: SANS 10139, EN54-23 W VAD Approved Visual Alarm Device (Strobe Light) with Deckhead mounting box, open area VAD CAT. W model, 17 to 28 DC	No	1		
18.74	PH30 Fire Resistant Cable	m	72		
18.75	25mm Conduit	m	65		
Total carried forward					

	Total brought forward				
	TRANSFORMER ROOM 3				
	FK-5-1-12 Fire Suppression System consisting of the following:				
18.76	Class A & C fires (Transformer Room 3) 180.594468 m3, size 180 L, 82 kg (GC1) .	No	2		
18.77	Ceiling Nozzle 180 Degrees.	No	1		
18.78	Trench Nozzle 180 Degrees	No	1		
18.79	Sets of warning signs	sum	1		
18.80	Steel Piping Schedule 40, as per manufacturer computer program required sizes	sum	1		
18.81	All accessories, items or fittings required for the correct operation of the plant, pipework or systems as per the standards and manufacturers' recommendations for the OEM chosen. This should include but not be limited to pipe supports, dirt traps, door caution plates, etc.	sum	1		
18.82	Support brackets, electrical actuator and all other components required for each cylinder as per manufacturer's recommendations.	No	2		
18.83	Approved Pressure Relief Vents, with wall liner, and fixed weather louvre, which shall comply with EWCL5 and BS EN1634-1, as per drawing locations	No	1		
	FK-5-1-12 Fire Detection System consisting of the following:				
	SMOKE DETECTOR: CEILING ROOMS SANS 10139, 50054-7, EN 54				
18.84	Approved Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	4		
	VOID SMOKE DTECTOR: TRENCH SANS 10139, 50054-7, EN 54				
18.85	Approved Void Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	3		
	Total carried forward				



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	Total brought forward				
18.86	MANUAL CALL POINT SANS 50054-11 (TYPE A), EN 54 Approved Manual Call Point Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, -20 to +60 degrees Celsius.	No	1		
18.87	SOUNDER: SANS 10139, E54-3 TYPE B Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.	No	1		
18.88	EXTINGUISHER CONTROL/ RELEASE PANEL: SANS 10400 T, EN54-2, EN12094-1 Approved Extinguisher Control/ Release Panel, K11031M2 with Batteries as per as extras, Volume 120dB(A)LED Emitting Red Light, 230 V	No	1		
18.89	EXTINGUISHER STATUS UNIT: SANS 10400 T, EN54-2, EN54-4, EN54-13 Approved Extinguisher Status Unit with Batteries as per as extras, extinguishing status unit type, 21 to 30 V DC	No	3		
18.90	STROBE LIGHT: SANS 10139, EN54-23 W VAD Approved Visual Alarm Device (Strobe Light) with Deckhead mounting box, open area VAD CAT. W model, 17 to 28 DC	No	1		
18.91	PH30 Fire Resistant Cable	m	72		
18.92	25mm Conduit	m	65		
	TRANSFORMER ROOM 4				
	FK-5-1-12 Fire Suppression System consisting of the following:				
18.93	Class A & C fires (Transformer Room 4), 180.594468 m3, size 180 L, 82 kg	No	2		
18.94	Ceiling Nozzle 180 Degrees.	No	1		
18.95	Trench Nozzle 180 Degrees	No	1		
	Total carried forward				



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	Total brought forward				
18.96	Sets of warning signs	No	3		
18.97	Steel Piping Schedule 40, as per manufacturer computer program required sizes	sum	1		
18.98	All accessories, items or fittings required for the correct operation of the plant, pipework or systems as per the standards and manufacturers recommendations for the OEM chosen. This should include but not be limited to pipe supports, dirt traps, door caution plates, etc.	sum	1		
18.99	Support brackets, electrical actuator and all other components required for each cylinder as per manufacturer's recommendations.	No	2		
18.100	Approved Pressure Relief Vents, with wall liner, and fixed weather louvre, which shall comply with EWCL5 and BS EN1634-1, as per drawing locations	No	1		
	FK-5-1-12 Fire Detection System consisting of the following:				
	SMOKE DETECTOR: CEILING ROOMS SANS 10139, 50054-7, EN 54				
18.101	Approved Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	4		
	VOID SMOKE DETECTOR: TRENCH SANS 10139, 50054-7, EN 54				
18.102	Approved Void Smoke Detector White Polycarbonate, LED Emitting Red Light, 17-28V DC, -20 to +60 degrees Celsius.	No	3		
	MANUAL CALL POINT SANS 50054-11 (TYPE A), EN 54				
18.103	Approved Manual Call Point Flame Retardant Polycarbonate with MCP Hinged Protective Flap as extras, LED Emitting Red Light, 17-35V DC, -20 to +60 degrees Celsius.	No	1		
	SOUNDER: SANS 10139, E54-3 TYPE B				
18.104	Approved Internal Powered Sounder with sound base and power supply with strong light as extras, Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius.	No	1		
	Total carried forward				

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	Total brought forward				
18.105	EXTINGUISHER CONTROL/ RELEASE PANEL: SANS 10400 T, EN54-2, EN12094-1 Approved Extinguisher Control/ Release Panel, K11031M2 with Batteries as per as extras, Volume 120dB(A)LED Emitting Red Light, 230 V	No	1		
18.106	EXTINGUISHER STATUS UNIT: SANS 10400 T, EN54-2, EN54-4, EN54-13 Approved Extinguisher Status Unit with Batteries as per as extras, extinguishing status unit type, 21 to 30 V DC	No	3		
18.107	STROBE LIGHT: SANS 10139, EN54-23 W VAD Approved Visual Alarm Device (Strobe Light) with Deckhead mounting box, open area VAD CAT. W model, 17 to 28 DC	No	1		
18.108	PH30 Fire Resistant Cable	m	72		
18.109	25mm Conduit	m	65		
18.110	Approved Externally powered Sounder Schedule with sound base and power supply with strong light as extras, 120 sounder Volume 120dB(A)LED Emitting Red Light, 10- 60 V DC, -25 to +70 degrees Celsius, 1.8 kg weight	No	2		
	Sundry Items				
18.111	Installation Of Complete Fire Suppression and Detection System	sum	1		
18.112	Integration of fire detection system with HVAC system ensures HVAC system shuts down and fire dampers close when the fire alarm is triggered. (This shall include design, supply installation and testing of the integration system complete with all components, wires, conduit etc. necessary to ensure the system operates correctly.)	sum	1		
18.113	Provision for Fire Stop	sum	1		
18.114	Detailed Workshop Drawings, Computer models of gas suppression system on OEM software, hydraulic calculations and Equipment List	sum	1		
18.115	As Built Drawings (DWG and PDF)	sum	1		
	Total carried forward				

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	Total brought forward				
18.116	Room integrity testing for gas suppression system (This shall include cost of retrofitting of doors and openings to meet the sealing requirements of the gas suppression system)	sum	1		
18.117	FAT and SAT of all fire Suppression equipment by Independent Certified Engineer/Provider.	sum	1		
18.118	FAT and SAT of all fire detection equipment by Independent Certified Engineer/Provider.	sum	1		
18.119	Detailed Commissioning plan	sum	1		
18.120	Commissioning of all fire suppression equipment.	sum	1		
18.121	Commissioning of all fire detection equipment.	sum	1		
BILL-TOTAL CARRIED TO FINAL SUMMARY					



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INFRASTRUCTURE AT STURROCK DRY DOCK FOR THE PORT OF CAPE TOWN FOR A PERIOD OF TWO (2) YEARS

Item	Description	Unit	Quantity	Unit Rate	Total Amount
	SECTION19: HVAC				
19	BILL NO.19: MECHANICAL WORK				
	HVAC (HEATING, VENTILATION AND AIRCONDITIONING)				
	Supply, deliver and install, testing and commissioning the following Units as per specification:				
	SPLIT AIR-CONDITIONING:				
19.1	Wall mounted Split unit air- conditioner, Cooling Capacity 9.78 kW, Heating Capacity 8.5 kW, Power requirement of 3.99 kW at 1/220-240/50 with 67.1 kg mass, and unit size 1200x360x265 for the outdoor unit.	No	2		
19.2	Wall mounted Split unit air- conditioner, Cooling Capacity 9.78 kW, Heating Capacity 8.5 kW, Power requirement of 3.99 kW at 1/220-240/50 with 67.1 kg mass, and unit size 1200x360x265 for the outdoor unit.	No	2		
19.3	All accessories including but not limited to, copper refrigerant piping, refrigerant, valves, and terminations, electrical power supplies and breakers, as well as condensate PVC drainage pipes, to closest drainage point, and all other accessories required for fully functional systems	No	4		
	FRESH AIR FAN:				
19.4	Wall mounted, approve fresh combination Air Fan, 155 L/s air quantity with 1.4 kW and 1/220/50 power supply	No	1		
19.5	Wall mounted, approve fresh combination Air Fan, 155 L/s air quantity with 1.4 kW and 1/220/50 power supply	No	2		
	Total carried forward				



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	Total brought forward				
19.6	EXTRACTION AIR FAN: Approve Centrifugal vertical discharge Roof Extraction Air Fan c/w roof support adaptor, with 2000 L/s air quantity, 73.5 kg mass, with a power requirement of 2.547 kW at 3/400/50.	No	2		
19.7	Approve Centrifugal vertical discharge Roof Extraction Air Fan c/w roof support adaptor, with 2000 L/s air quantity, 73.5 kg mass, with a power requirement of 2.547 kW at 3/400/50.	No	2		
	WEATHER LOUVRE				
19.8	355x 355 mm Galvanized steel weather Louvre, with steel mesh	No	6		
19.9	1000 x 630 mm Galvanized steel weather Louvre, with steel mesh	No	2		
19.10	600 x 850 mm Galvanized steel weather Louvre, with steel mesh	No	2		
	GRILLES/ DIFFUSERS				
19.11	1150 X 500mm Exact Air Rectangular to connect directly to ducting	No	4		
	FIRE DAMPER				
19.12	355 x 355 mm approved Motorised blade fire damper, with activation mechanism, spring return actuator, an electro-thermal fuse 72 degrees C Auxiliary switches, supply and communication unit.	No	6		
19.13	500 x 450 mm approved Motorised blade fire damper, with activation mechanism, spring return actuator, an electro-thermal fuse 72 degrees C Auxiliary switches, supply and communication unit.	No	4		
19.14	1000 x 630 mm approved Motorised blade fire damper, with activation mechanism, spring return actuator, an electro-thermal fuse 72 degrees C Auxiliary switches, supply and communication unit.	No	2		
19.15	600 x 850 mm approved Motorised blade fire damper, with activation mechanism, spring return actuator, an electro-thermal fuse 72 degrees C Auxiliary switches, supply and communication unit.	No	2		
19.16	Duct Suspension kit with Fittings	No.	1		
	Total carried forward				

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	Total brought forward				
19.17	Labor/Installation	%	35		
	Testing and Commissioning				
19.18	Detailed Workshop Drawings and Equipment List	sum	1		
19.19	As Built Drawings (DWG and PDF)	sum	1		
19.20	FAT and SAT of all HVAC equipment by Independent Certified Engineer/Provider.	sum	1		
19.21	Commissioning of all HVAC equipment.	sum	1		
BILL-TOTAL CARRIED TO FINAL SUMMARY					



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Item	Description	Unit	Quantity	Unit Rate	Total Amount
20	SECTION 20: PAINT WORK BILL NO.21: PAINTWORK For preambles see "Model Preambles for trades (2008 Edition)" and applicable Supplementary Preambles as specified in the Trades. The said Model and Supplementary Preambles apply to all work described in this document. Tenderers are therefore referred to these documents for the full meaning and intention of all descriptions and no claims of any kind whatsoever will be entertained in this regard. SUPPLEMENTARY PREAMBLES PAINTWORK ETC TO NEW WORK All work to be executed in strict accordance with the specifications of the paint manufacturer. Primers and first coats may be thinned in accordance with the paint specifications of the paint manufacturer to aid the absorption of the paint. All surfaces must be sound, clean and have a moisture content of less than 8% for walls generally and 3% for				

	slabs/screeds etc. Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth The contractor will be required to be compliant with regulations and quality standards outlined in the PW371 Construction works specifications, Second edition July 2013. PAINT SPECIFICATIONS Painting, etc. All painting shall be done in accordance with specifications unless otherwise described COLOURS Colours, etc. Unless otherwise described all paintwork shall be deemed to have a colour value in excess of 7 on the Munsell system in accordance with SANS 1091 ON INTERNAL FLOATED PLASTER SURFACES One coat alkali resistant primer and two coats PVA emulsion paint for interior use				
20.1	Walls ON SMOOTH CONCRETE SURFACES	m ²	866		
	Total carried forward				



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	Total brought forward				
20.2	One coat alkali resistant primer and two coats PVA emulsion paint for interior use, including stopping blow holes Underside of slab ON WOOD SURFACES One coat primer and two coats premium quality polyurethane enamel paint	m ²	322		
20.3	Doors Three coats superior quality clear gloss varnish	m ²	132		
20.4	Doors	m ²	42		
BILL-TOTAL CARRIED TO FINAL SUMMARY					



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Item	Description	Unit	Quantity	Unit rate	Total Amount
	BILL NO 21: PROVISIONAL SUMS				
	SECTION 21				
	CIVIL				
	The civil scope includes Design and Construction of the new Sturrock Dry Dock electrical Infrastructure which includes Building works, bulk earthworks & bulk services, stormwater services, pavement layer works, Trenching/excavations for cable route complete. Refer to scope of works	Prov sum	1		
	Profit and Attendance	%			
	STRUCTURAL				
	The structural scope of work for Sturrock Dry Dock Electrical Infrastructure includes the review of current designs. Submit detailed designs to the level of construction. Supply, install, construct and commission of new Sturrock Dry Dock Electrical Infrastructure and associated structural works requirements for the electrical infrastructure, which include but not limited to Reinforced concrete beams and columns, Brick wall and foundations (pad and strip footings), Reinforced concrete bases, Surface bed, Concrete ramps, Trenching, Reinforced roof slabs, structural steel works, core drilling on new cable route and Complete.	Prov sum	1		
	Profit and Attendance	%			
	Total carried forward				



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	Total brought forward				
	ELECTRICAL The Electrical Scope includes the Review of current design, submitting detailed designs to the level of construction, supply and installation of 11.75kV substation electrical equipment which includes MV switchgears. (11.75kV and 3.3Kv switchgears), Dry Type Transformers ,Motor Control Center, new Low Voltage (LV) distribution board (DB) , Medium Voltage (MV) cables, Low Voltage (LV) cables, Medium Voltage (MV) cables, Terminations, and Joints, Low Voltage (LV) cables, Terminations, and Joints, Lighting and Small Power including all the associated infrastructure for the Lighting and Small Power, Power Factor Correction (PFC) including all the associated infrastructure, backup power supply (generator),Earthing and Lightning protection for Substation, Decommissioning of the existing equipment at Sturrock Dry Dock and Graving Dock underground substations, including all the cabling within the tunnel and Testing and Commissioning and handover of the entire work and hand it over to the Employer, Complete Profit & Attendance	Prov sum	1		
		%			
	C&I The C&I scope include the review of current designs, develop and submit detailed designs to the level of construction, supply, Installation, testing and commissioning of Electronic Communication equipment, cables, intelligent devices, local SCADA software and hardware (remote terminals unit, workstation, HMI.) and Integration of the new protection and SCADA of the new Substation to the existing Electrical network of the Port, Complete. Profit & Attendance	Prov sum	1		
		%			
BILL-TOTAL CARRIED TO FINAL SUMMARY					

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	FINAL SUMMARY	
	SECTION	AMOUNT
1	SECTION NO. 1: PRELIMINARIES AND GENERAL	R
2-6	SECTION 2,3,4,5,6: EXTERNAL WORKS	R
7	SECTION 7: EARTHWORKS	R
8-9	SECTION 8-9: CONCRETE	R
10	SECTION 10: MASONRY	R
11	SECTION 11: WATER PROOFING	R
12	SECTION 12: CARPENTRY AND JOINERY	R
13	SECTION 13: IRONMONGERY	R
14	SECTION 14: METAL WORK	R
15	SECTION 15: PLASTERING	R
16	SECTION 16: PLUMBING AND DRAINAGE	R
17	SECTION 17: ELECTRICAL WORK	R
18	SECTION 18: FIRE PROTECTION	R
19	SECTION 19: HVAC	R
20	SECTION 20: PAINT WORK	R
21	SECTION 21: PROVISIONAL SUMS	R
	TOTAL CARRIED TO FORM OF OFFER & ACCEPTANCE (EXCLUDING VAT)	R



PART C3

SCOPE OF WORK



PART C3: SCOPE OF WORK

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C3.2	<i>Contractor's Works</i>	94
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C3.1 EMPLOYER'S WORKS INFORMATION

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SECTION 1

1 Description of the *works*

1.1 Executive overview

The *works* that the *Contractor* is to perform at The Sturrock Dry Dock (SDD) electrical infrastructure upgrade project is one of the projects developed by the Port of Cape Town in its drive to modernize its ship repair facilities as mandated by Operation Phakisa. This is to improve operational efficiencies and bring the facilities up to international standards.

The Sturrock dry dock commissioned in 1945 and is one of the two graving type dry docks in the Port of Cape Town that is used for the repair and maintenance of marine vessels. It is essentially a narrow basin with one end open to the sea. During docking, a vessel is manoeuvred into the basin and the open end closed off by means of a caisson gate. The basin is then dewatered such that the vessel rests on the dry dock floor for repairs to commence.

The facility consists of two key areas consisting of electrical infrastructure that support the dry dock operations, namely: Graving Dock Substation & Pump House Substation, of which both these substations are located underground as depicted in figure one below, with red blocks. These substations are critical for the operation of all the mechanical equipment within the dry docks including the capstans, cranes, shore supply, kiosks and pumps, which are essential for the docking of vessels within the dry dock. With the prolonged usage, the electrical infrastructure is aged and has become obsolete and in a state of disrepair that affects the dock's operational efficiencies negatively.

The positioning of the equipment poses potential danger should any flooding occur, and the area has a lack of adequate fire-fighting capability. Thus, the positioning of these equipment is non-compliant to statutory and legislation requirements with specific references to both the SANS and the Occupational Health and Safety Act [Act 85 of 1993] and Transnet Safety Standards. It has therefore become necessary for the Port of Cape Town to restore the electrical infrastructure to an efficient and compliant operating state.

In response, the Port of Cape Town has accepted the recommendation of a feasibility study completed by others, to replace the existing electrical equipment with newer technology and upgraded systems, and to construct a new above ground substation to comply with the current Occupational Health and Safety Act and its regulations.



Figure 1. Ariel view of Sturrock Dry Dock depicting location of the two underground substations and proposed location of new substation



Figure 2. Location of SDD in the Port of Cape Town

1.2 Employer's objectives

- i. The Employer seeks to acquire the services of a suitably qualified and resourced Multidisciplinary Construction Contractor to procure all material, equipment and execute all the works associated with the Sturrock Dry Dock (SDD) bulk electrical infrastructure upgrade project.
- ii. The project's objective is to replace the electrical equipment with modern technology to bring SDD up to par with global standards of operation and efficiencies.
- iii. In addition to the above, the Employer's objectives are to achieve completion of the works by meeting the completion date whilst still maintaining the highest environmental, quality and safety standards and whilst minimising disruptions to on-going port activities and operations by other stakeholders within the Sturrock Dry Dock.

- iv. This works information shall be read in conjunction with the drawings and specifications. All works to be carried out shall be performed with full adherence to safe practice. The main Works include but not limited to the following items stated below:

Table 1. Project Scope

Scope Item
1. Conduct necessary site investigation for construction inclusive but not limited to underground service detection.
2. Provide a suitably qualified team for the works which include design, construction, installation, testing and commissioning of the new substation infrastructure.
3. Demolition of an unutilised building (block of toilets) and relocate bulk services at the proposed substation location, which is within Sturrock Dry Dock precinct as per C4 site information. This shall clear the site to construct a new above ground level substation building.
4. Prepare site layer works as per issued drawings and specifications
5. Design, supply and Installation of substation earthing in accordance to drawings and specifications.
6. Construct all the associated civil works, which is inclusive of cable trenching, laying of sleeves, paving and installation of protective barriers.
7. Procure, delivery to site , installation and testing of bulk electrical equipment.
8. Design, Supply, Procure, delivery to site, installation, testing and terminating of MV/LV cables for reticulation network.
9. Procure, delivery to site , installation and testing of mechanical equipment, including HVAC, fire protection, gas suppression and detection system (inclusive of associated telecoms and SCADA). The <i>Contractor</i> shall be responsible for the design of the control systems that will be used to integrate the fire protection with the HVAC systems which shall shut off all HVAC systems in the event of a fire being detected as well as close all fire dampers. The <i>Contractor</i> shall also design the control systems for all mechanical systems to communicate to the SCADA system. The <i>Contractor</i> shall ensure that the gas suppression system installed has undergone a full computer simulated verification by an approved FK-5-1-12 provider and installer. This shall include, but not be limited to, pipe sizing, nozzle sizing, pipe lengths, and all auxiliary equipment needed for the effective performance of the system as per The <i>Employers</i> Design.
10. Detail design, supply, deliver, install, configure, test and commission all associated of control (secondary) plant equipment, inclusive of substation automation system (local and remote SCADA, RTU, Server, HMI, etc) and industrial communication network infrastructure. Integrate all primary and Auxiliary equipment to the SAS.
11. Conduct necessary Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) in line with issued quality plans.
12. Testing and commissioning of the entire substation inclusive of reticulation network prior to handover to the Employer.
13. Skills transfer and training of TNPA operational staff on operation and maintenance of new equipment.
14. Project Handover to Employer for commercial operation.
15. Decommission and transportation of the existing equipment and cables in the below ground substations to predetermined area specified by the <i>Employer</i> .

- i. The equipment to be installed is as follows but not limited to those stated below

Table 2. Equipment to be Installed

System	New Equipment
Electrical Power Supply	• 11.75kV and 3.3kV Switchgear Panels • 400V MCC Panels • 220V Small Power and Lighting power distribution from and including distribution board • 2 x 5 MVA 11.75/3.3kV transformers • 2 x 3 MVA 11.75kV/400V transformers • MV Cable • LV Cable • Lighting and Small Power for building and Cable Tunnel including all the associated infrastructure, • Lightning Protection and Earthing • Substation Protection and Integration into existing infrastructure • Power factor Correction • Backup Power Supply
Substation Automation System (SAS)	• RTU/PLC and SCADA based control system including HMI, Server, field instruments, telemetry, and communication network Infrastructure.
Battery Terminal Unit (BTU)	• Provide 110V DC to high voltage breaker protection and control circuit.
HVAC Systems	• HVAC System – In-line axial box fan, sound attenuators, fan filter units, fire dampers, sheet metal ductwork, roof extraction fans, air diffusers, air filters, in-wall pressure relief dampers, fire stopping around duct/wall, and any other penetrations between different spaces..
Fire Protection, Detection and Suppression systems	• Gas Suppression – FK 5-1-12 gas system complete with all piping systems, actuation mechanisms and all other components required for an approved system. • Fire Detection System • Fire extinguisher • Fire signage

a) The civil works to be constructed is as follows but not limited to those stated below:

Table 3 Civil works to be completed

Civil Works	• Building Works including bulk services • Stormwater services • Pavement Layer works
-------------	---

	Trenching / Excavations for cable route
--	---

1.3 Interpretation and terminology

For the purposes of this Contract for all matters regarding technical decisions, Acceptance of Engineering related technical documents, Testing, Commissioning and any matters pertaining to the context of the Occupational Health and Safety Act, the *Contractor* is required to cooperate with the *Employer's* Engineers/Professional Engineers as per the NEC3 Engineering and Construction Contract (ECC) Core Clause 25.1 and Clause 14.2 as delegated by the *Project Manager* and the *Supervisor*, for the former and as applicable in the context. The instructions received by the *Contractor* shall be interpreted as lawful in matters pertaining to the former if the instruction has been endorsed by both the *Project Manager* or *Supervisor* and the *Employer's* Engineers/Professional Engineers as applicable in the context.

The *Employer's* Engineers shall be named post-award of the Contract and prior to commencement of the Works. The *Contractor* is further advised that, in compliance with Core Clause 25.1, that cooperation with the *Employer's* Engineers and other representatives of the *Employer* (*Others*) is a requirement of this Contract and the *Contractor* is to allow, grant and facilitate all reasonable access that may be required by the *Employer's* Engineers and *Others* as applicable, for the provision of the Works.

The following terminology is used in this document:

Term	Meaning given to the term
Drawings	The latest revision of the construction drawings
Specification/s	The document/s forming part of the Contract, in which methods of executing the various items of work, and the nature and quality of the materials to be supplied are described. The specification includes technical schedules and drawings attached thereto as well as all samples and patterns interpretation of incorporated documentation.
<i>Supervisor</i>	As defined in the NEC3 ECC contract. Responsible for checking that the works are constructed in accordance with the drawings and the specifications.
<i>Project Manager</i>	As defined in the NEC3 ECC contract. Responsible for contractual matters, cost, and time.
<i>Contractor</i>	As defined in the NEC3 ECC contract, the company engaged to construct the works.
Works	As defined in the NEC3 ECC contract. That which is to be constructed/executed.
Native	Original electronic file format of documentation

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
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AIA	Authorised Inspection Authority
BBBEE	Broad Based Black Economic Empowerment
CEMP	Construction Environmental Management Plan
CD	Compact Disc
CDR	Contractor Documentation Register
CDS	Contractor Documentation Schedule
CRL	Contractor Review Label
CSHEO	Contractor's Safety, Health and Environmental Officer
CM	Construction Manager
DTI	Department of Trade and Industry
DWG	Drawings
EO	Environmental Officer
HAW	Hazard Assessment Workshop
HAZOP	Hazard and Operability Study
HSSP	Health and Safety Surveillance Plan
INC	Independent Nominated Consultant
IP	Industrial Participation
IR	Industrial Relations
IPP	Industrial Participation Policy
IPO	Industrial Participation Obligation
IPS	Industrial Participation Secretariat
IRCC	Industrial Relations Co-ordinating Committee
JSA	Job Safety Analysis
CIRP	Contractor's Industrial Relations Practitioner
Native	Original electronic file format of documentation
PES	Project Environmental Specifications
PHA	Preliminary Hazard Assessment
PIRM	Project Industrial Relations Manager
PIRPMP	Project Industrial Relations Policy and Management Plan
PLA	Project Labour Agreements
PSIRM	Project Site Industrial Relations Manager
PSPM	Project Safety Program Manager
PSSM	Project Site Safety Manager
ProgEM	Programme Environmental Manager
ProjEM	Project Environmental Manager
QA	Quality Assurance
R&D	Research and Development
SANS	South African National Standards
SASRIA	South African Special Risks Insurance Association
SES	Standard Environmental Specification
SHE	Safety, Health and Environment
SHEC	Safety, Health and Environment Co-ordinator
SIP	Site Induction Programme
SMP	Safety Management Plan
SSRC	Site Safety Review Committee

2 Engineering and the *Contractor's* design

2.1 *Employer's* design

2.1.1 The *Employer's* design for the *works* is:

- i. It is a condition of tender that the Bidder shall have thoroughly read all the tender documents and shall have inspected the site, prior to the submission of a tender for the project.
- ii. By such an inspection, the Tenderer shall be deemed to be fully informed as to the objectives, specifications, nature and degree of complexity of the project, the constructional problems related thereto, and the conditions under which the work is to be carried out, the means of access to the site and generally of all matters that may influence his tender.
- iii. The Employer makes available his detailed design reports to clarify his assumptions to tenderers when pricing. These reports are cover the both the electrical and mechanical disciplines.

Table 4. *Employer's* Detailed Design Reports

<u>Document Title</u>	<u>Document No.</u>
Electrical Detailed Design Report	TNPA/2020-EE-RPT-0001

The Employer furthermore avails all drawings and specifications developed in the previous phase to elaborate on the works required. This excludes the mechanical engineering scope which will supply new Tender Drawings and Technical Specifications.

2.1.2 The *Employer* grants the *Contractor* a licence to use the copyright in design data presented to the *Contractor* for the purpose of the *works* (and the *Contractor's* obligation under paragraph 2.2 of the *Employer's* Works Information) ONLY.

2.1.3 **Electrical Design and Engineering**

- i. All works to be carried out shall be performed with full adherence to safe practice of electrical installations as stipulated in SANS 10142-1, SANS 10142-2, OHS Act 85 of 1993 (Electrical Installation Regulations) and all applicable IEC and IEEE standards. The *Employer's* Design for any electrical part of the works is described in the following drawings:

Table 5. Employer's Electrical Detailed Design Drawings

Drawing Number	Drawing Title	Sheet no.	Revision
TNPA/2020-000-E-ELPS-0001	EARTHING AND LIGHTNING PROTECTION	Sheet 001	00
		Sheet 002	
		Sheet 003	
TNPA/2020-000-E-EL-0001	LOW VOLTAGE EQUIPMENT GENERAL ARRANGEMENT LAYOUT	Sheet 001	00
TNPA/2020-000-E-EL-0002	MEDIUM VOLTAGE EQUIPMENT LAYOUT	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
TNPA/2020-000-E-EL-0003	TRANSFORMER EQUIPMENT LAYOUT	Sheet 001	00
		Sheet 002	
TNPA/2020-000-E-EL-004	OVERALL SUBSTATION LAYOUT	Sheet 001	00
TNPA/2020-000-E-CR-0001	ELECTRICAL SUBSTATION SITE LOW VOLTAGE CABLE RACKING AND ROUTING LAYOUT	Sheet 001	00
TNPA/2020-000-E-CR-0002	ELECTRICAL SUBSTATION SITE MEDIUM VOLTAGE CABLE RACKING AND ROUTING LAYOUT	Sheet 001	00
TNPA/2020-000-E-CR-003	ELECTRICAL SUBSTATION CABLE RACKING AND ROUTING LAYOUT	Sheet 001	00
		Sheet 002	
		Sheet 003	
TNPA/2020-000-E-SLD-0001	LOW VOLTAGE SINGLE LINE DIAGRAM	Sheet 001	00
TNPA/2020-000-E-SLD-0002	MEDIUM VOLTAGE SINGLE LINE DIAGRAM	Sheet 001	00
TNPA/2020-000-E-MSCH-0001	3.3KV BUSCOUPLER SCHEMATIC	Sheet 001	00
	DIAGRAM	Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	
TNPA/2020-000-E-MSCH-0002	3.3KV INCOMER SCHEMATIC DIAGRAM	Sheet 001	00

		Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	
TNPA/2020-000-E-MSCH-0003	3.3KV MOTOR FEEDER SCHEMATIC DIAGRAM	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
TNPA/2020-000-E-MSCH-0004	3MVA TRANSFORMER FEEDER SCHEMATIC DIAGRAM	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	
TNPA/2020-000-E-MSCH-0005	5MVA TRANSFORMER FEEDER	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	
TNPA/2020-000-E-MSCH-0006	11.75KV BUSCOUPLER SCHEMATIC	Sheet 001	00
	DIAGRAM	Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	
TNPA/2020-000-E-MSCH-0007	11.75KV INCOMER SCHEMATIC DIAGRAM	Sheet 001	00
		Sheet 002	

		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	
TNPA/2020-000-E-MSCH-0008	MISPLON MINISUB FEEDER SCHEMATIC DIAGRAM	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
TNPA/2020-000-E-LSP-0001	LIGHTING AND SMALL POWER LAYOUT	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
TNPA/2020-000-E-GDB-0001	GRAVING DOCK LV BOARD	Sheet 001	00
		Sheet 002	
TNPA/2020-000-E-PDB-0001	PUMPHOUSE LV BOARD	Sheet 001	00
		Sheet 002	
TNPA/2020-000-E-BKB-0001	BERRIO ROAD KIOSK	Sheet 001	00
		Sheet 002	
TNPA/2020-000-E-LSCH-0001	LOW VOLTAGE DIAGRAM-400V INCOMER AND BUSCOUPLER SCHEMATIC	Sheet 001	00
TNPA/2020-000-E-LSCH-0003	400V FEEDER SCHEMATIC FOR PLINTHBOX CONTRACTOR PORT SIDE	Sheet 001	00
TNPA/2020-000-E-LSCH-0004	400V FEEDER SCHEMATIC FOR PLINTHBOX CONTRACTOR STARBOARD SIDE	Sheet 001	00
TNPA/2020-000-E-LSCH-0005	400V FEEDER SCHEMATIC FOR PUMPHOUSE FEEDER 1 & 2 TO LV BOARD	Sheet 001	00
TNPA/2020-000-E-LSCH-0006	400V FEEDER SCHEMATIC FOR 20 TON CAPSTAN STARBOARD SIDE 1-2-3	Sheet 001	00

TNPA/2020-000-E-LSCH-0007	400V FEEDER SCHEMATIC FOR 20 Ton CAPSTAN STARBOARD SIDE 4-5 & 7Ton CAPSTAN STARBOARD SIDE 1-2	Sheet 001	00
TNPA/2020-000-E-LSCH-0008	400V Feeder Schematic for Capstan Port Side 6-7 _and Port Side 1-2	Sheet 001	00
TNPA/2020-000-E-LSCH-0009	400V Feeder Schematic for Plinthbox Starboard Side 1-2-3	Sheet 001	00
TNPA/2020-000-E-LSCH-0010	400V Feeder Schematic for Plinthbox Port Side 6- 7	Sheet 001	00
TNPA/2020-000-E-LSCH-0011	400V Feeder Schematic for Plinthbox Port Side 8- 9-10	Sheet 001	00
TNPA/2020-000-E-LSCH-0012	400V Feeder Schematic for Plinthbox Starboard Side 4-5	Sheet 001	00
TNPA/2020-000-E-LSCH-0013	400V Feeder Schematic for Capstan Port Side 8-9- 10	Sheet 001	00
TNPA/2020-000-E-LSCH-0014	400V Feeder Schematic for Berrio Road Kiosk	Sheet 001	00
TNPA/2020-000-E-LSCH-0015	400V Feeder Schematic for Haulage Chamber 1_2	Sheet 001	00
TNPA/2020-000-E-LSCH-0016	400V Feeder Schematic for Servest Feeder	Sheet 001	00
TNPA/2020-000-E-LSCH-0017	400V Feeder Schematic for Graving Dock LV Board	Sheet 001	00
TNPA/2020-000-E-LSCH-0018	400V Feeder Schematic for Pumphouse LV Board	Sheet 001	00
TNPA/2020-000-E-LSCH-0019	400V Feeder Schematic for New SDD Substation Sub DB	Sheet 001	00
TNPA/2020-000-E-LSCH-0020	400V Feeder Schematic for Cranes Supply Starboard Side 1-2-3 _ 4-5-6	Sheet 001	00
TNPA/2020-000-E-LSCH-0021	400V Feeder Schematic for Cranes Supply Port Side 7-8-9 _10-11-12	Sheet 001	00
TNPA/2020-000-E-LSCH-0022	400V Feeder Schematic for Pumphouse Feeder 1_2	Sheet 001	00
TNPA/2020-000-E-LSCH-0022	400 Feeder Schematic for 1MVA diesel Generator Feeder 1_2	Sheet 001	00

- i. The *Employer* provides, as part of his **Detailed Design Report** stated above, the Electrical datasheets for the Contractor to detail them and ensure that the documents are ready for construction purposes.

ii. The *Employer's* specifications for all electrical works are described as follows , therefore, it is the contractor's responsible to further develop these specifications.

- a. MV Switchgear Specification
- b. Motor Control Centre Specification
- c. Battery Tripping Unit Specification
- d. Dry Type Transformer Specification
- e. Backup Diesel Generator
- f. Cable Specification
- g. LV Distribution board Specification

2.1.4 Mechanical Detailed Design and Engineering

The *Employer's* detailed design for any mechanical part of the works is described in the following drawings:

Table 6. *Employer's* Mechanical Detailed Design Drawings

<u>Drawing Number</u>	<u>Drawing Title</u>	<u>Revision</u>
XCT.E.0021-1-M-LA-ST0001	Sturrock Dry Dock Upgrade Fire Suppression Layout	.B
XCT.E.0021-1-M-LA-ST0002	Sturrock Dry Dock Upgrade Fire Detection Layout	.B
XCT.E.0021-1-M-LA-ST0003	Sturrock Dry Dock Upgrade Fire Detection Trench Layout	.B
XCT.E.0021-1-M-LA-ST0004	Sturrock Dry Dock Upgrade HVAC Layout	.C

The *Employer* provides the mechanical specifications as depicted in the table below. The bidder shall review and ensure the supply of material and equipment as specified in the specifications section stated in the report.

<u>Document Number</u>	<u>Document Title</u>	<u>Revision</u>
XCTE-0021-ENG-M-SP-0002	Technical Specification for Supply, Installation, Test, Commission and Handover Air-Conditioning and Ventilation System System	OA
XCTE-0021-ENG-M-SP-0003	Technical Specification for Supply, Installation, Test, Commission and Handover of Fire Suppression System	OA
XCTE-0021-ENG-M-SP-0004	Technical Specification for Supply, Installation, Test, Commission and Handover Gas Suppression System	OA

XCTE-0021-ENG-M-SP-0005	Technical Specification for Supply, Installation, Test, Commission and Handover of Fire Stop System	OA
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The *Contractor* shall ensure that all plant and materials comply with the drawings and technical specifications provided. The *Contractor* shall submit for approval detailed workshop drawings including cut lists, weld diagrams, gas suppression model and calculations and technical specifications of all plant prior to the purchase or manufacturing of any plant and materials.

2.1.5 SCADA, Telemetry and Metering High-Level Design and Engineering

- i. The *Employer's* high-level schematic designs for any SCADA, Telemetry and Metering part of the works is described in the following drawings:

Table 7. *Employer's* SCADA, Telemetry and Metering High-Level Design Drawings

<u>Drawing Number</u>	<u>Drawing Title</u>	<u>Sheet no.</u>	<u>Revision</u>
TNPA2020-000-E-STM-0001	SCADA, TELEMETRY AND METERING LAYOUT	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
		Sheet 005	
		Sheet 006	

- ii. The Employer provides, as part of his Detailed Design Report stated in the Electrical Detailed Design Report, the SCADA, Telemetry and Metering datasheets. The bidder shall review and ensure the supply of material and equipment as specified in the datasheet. In cases where an alternative is provided, the completed and signed data sheet shall be attached to the mandatory returnable form Data Sheet Checklist:
 - a. SCADA
 - b. Telemetry
 - c. Power Meter

2.1.5 Structural Detailed Design and Engineering

- i. The *Employer's* Detailed Design for any Structural Engineering works is described in the following drawings:

Table 8. Employer's Structural Detailed Design Drawings

<u>Drawing Number</u>	<u>Drawing Title</u>	<u>Sheet no.</u>	<u>Revision</u>
TNPA/2020-SE-001	Foundation General Layout & Details	Sheet 1 of 2	1
TNPA/2020-SE-001	Foundation Reinforcement Layout & Details	Sheet 2 of 2	4
TNPA/2020-SE-002	Surface Bed Layout & Details		3
TNPA/2020-SE-003	Roof Layout & Details		3
TNPA/2020-SE-004	Movement Joint Location & Details		0
TNPA/2020-SE-005	Pad Footing & Column Reinforcement Layout & Section		0
TNPA/2020-SE-006	Roof Beams Reinforcement Layout & Sections - Sheet 1		0
TNPA/2020-SE-007	Roof Beams Reinforcement Layout & Section - Sheet 2		0
TNPA/2020-SE-008	Roof Beams Reinforcement Layout & Sections - Sheet 3		0
TNPA/2020-SE-009	Roof Slab Reinforcement Layout & Section		0
TNPA/2020-SE-010	Structural Framing -3D Views, Section & Schedules		0

- ii. The Employer's Specifications for any structural engineering works is described in the following documents:
 - o **ANNEXURE B:** Structural Works Technical Specifications
- iii. The Employer's GAP analysis report for all structural deficiencies is described in **ANNEXURE I**. The Contractor shall be required to execute the works in accordance with the following structural specifications, see section 4.2.

2.1.5 Civil Detailed Design and Engineering

- i. No detailed design has been completed for Civil Engineering by the Employer. The detailed design shall form part of the Contractor's design under subheading 2.2 in this document.

2.1.6. Architectural Drawings

- i. The Employer's Detailed Design for any Architectural Engineering works is described in the following drawings:

<u>Drawing Description</u>	<u>Sheet no.</u>	<u>Revision</u>
Site Plan	Sheet 001	05

Floor Plan	Sheet 002	05
Elevations	Sheet 003	05
Interior Renders	Sheet 004	05
Exterior Renders	Sheet 004	05

2.1.7

Health Safety and Environment

- i. The *Contractor* shall be required to execute the works in accordance with the following health, safety and environment specifications:

2.2 Parts of the works which the Contractor is to design

2.2.1 The *Contractor* is to design the following parts of the *works*:

- i. The *Contractors* warrants that the tender as submitted makes full allowances for all information provided in this Works Information and further documents referenced therein, and includes all and every item(s) required to provide the facilities as described.
- ii. Further to the above, it will also be the responsibility of the *Contractor* to ensure he has all and associated latest additions of statutory regulations and standards, Employer standards/specifications and the like. The Employer shall not be held liable in any way, shape or form as a result of losses incurred by the *Contractor* not adhering to the above.

2.2.2 The *Contractor* is responsible for review the drawings as provided by the employer and as indicated above in conjunction with annexure listed in C3 Scope of works and close all the gaps as identified on those annexures and ensure that the designs are fully compliance and ready for construction.

2.2.3 Unless expressly stated to form part of the design responsibility of the *Employer* as stated under 2.1 *Employer's* design above and whether or not specifically stated to form part of the design responsibility of the *Contractor* under this paragraph 2.2, all residual design responsibility and overall responsibility for the total design solution for the *works* rests with the *Contractor*.

2.2.4 General

All temporary or permanent works designed by the *Contractor* shall remain the *Contractor's* responsibility. The *Contractor* shall appoint suitably qualified, experienced and professionally registered engineers and designers, to be approved by the Employer, to carry out detailed designs for the permanent and where applicable temporary works, in accordance with this Works Information, the drawings and the project specifications. The *Contractor* shall indemnify and hold indemnified the Project Manager and Employer against any claims and actions that may arise out of the design and construction of such permanent and temporary works.

The *Contractor* shall be responsible for full compliance with all codes of practice, safety, professional procedures, checking, site approval and requirements of the construction regulations with regards to the temporary and permanent works.

The Contractor's designs shall be fully integrated with the design of the works as provided by the Employer.

Where temporary or permanent works are located close to or within infrastructure or property owned by others, e.g. Transnet, Eskom, Telkom, CDC or other service and utility owners as may be the case, the Contractor will be responsible for the following, but not limited to:

- i. Liaising with the relevant parties to ascertain impacts on existing property or on any planned activities. Measures to eliminate or mitigate such impacts shall be developed and agreed to with all affected parties.
- ii. Ensuring compliance with the applicable standards, procedures and requirements of such third parties.
- iii. Identify requirements and provide protection of all infrastructure owned by such third parties. For both permanent and temporary works the following shall apply i. All calculations must be authenticated and authorised by Professional Engineers and/or Technologists registered with the Engineering Council of South Africa. ii. The Contractor shall submit to the Employer and/or Supervisor for acceptance all design calculations and drawings for all permanent Works as well as all temporary works as listed below in section 2.2.2 and 2.2.3
- iv. The Contractor shall submit detailed drawings and workshop details for all designs, both Contractor's designs and Employer's designs, to the Project Manager for acceptance by the Employer's Engineers and/or Employer's Consultant
- v. The Contractor shall be responsible for full compliance with all codes of practice, safety, professional procedures, checking, Site approval and requirement of the construction regulations with regards to permanent Works as listed under section 2.2.2 of the Employer's Works Information as well as all temporary Works.
- vi. The Contractor is wholly responsible for all design coordination, integration and liaison activities involved the Works, and shall take all measures necessary and make all arrangements for activities such as meetings, inspections, endorsements, and any other activities required for the timely completion of the Works and to the appropriate quality. When these activities require the involvement of the Employer's Professional Engineering team or any other stakeholders, the Contractor is required to make these arrangements with due consideration of the Employer's Professional Engineering team's availability and the availability of other stakeholders.
- vii. The Contractor shall thus be wholly accountable and responsible for all aspects of his designs, including the implementation of all Statutory Safety, Health and Environmental Regulations of South Africa AND the particular requirements, specifications, and regulations of the Employer pertaining to Health and Safety, Environment, Quality and Engineering. vii. The Contractor shall be wholly accountable and responsible for the implementation of the aspects of his designs including commissioning, putting into service and handover of his constructed designs to the

Employer, and his duly appointed ECSA registered Engineers shall be held accountable and responsible for these aspects of the Works for the lifetime duration of the Works.

- viii. The Contractor is responsible in his design for the overall integration of the design of the works with the design of the Employer as stated under 2.1 Employer's design above and for all items stated under 2.2.2 and 2.2.3 above. ix. Unless expressly stated to form part of the design responsibility of the Employer as stated under section 2.1 Employer's design and whether or not specifically stated to form part of the design responsibility of the Contractor under this section 2.2, all residual design responsibility and overall responsibility for the total design solution for the works rests with the Contractor.

Table 10. Contractor's Design

Activity	Details	Deliverables
Final Design of Substation Automation System and communication network.	The appointed <i>Contractor</i> shall have a specialised, qualified and experienced electronic, control and instrument (EC&I) discipline personnel design team for the control plant systems, this includes protection, metering, supervisory/control, tie in of RTU/ telecommunications to existing fibre network and future SCADA network.	a) Design Specification, detailed drawings, I/O List and schedules. b) O&M Manuals and Data sheets
Design of the Fire Detection and Suppression systems	The fire detection and suppression systems have been designed, however the <i>Contractor</i> shall ensure that the gas suppression system design is run on the OEM gas suppression design software that shall be internationally certified. The gas suppression models including the gas calculations, balanced pipework design and sizing and the nozzle sizes shall be submitted for approval.	a) Gas suppression model, calculations and balanced pipework diagrams b) O&M Manuals c) Detailed Fabrication and workshop drawings
Temporary Works Designs	The Contractor shall design for all temporary works associated with all works relating to the project.	a) Temporary works designs signed off by an appropriate Professionally registered engineer
Structural works	The appointed <i>Contractor</i> shall have a qualified and experienced ECSA Structural Engineer/Technologist to; review the employer's structural design, finalize, complete & take ownership of the structural design, Issue approved construction drawings & specifications, provide Structural Certification of the construction works.	a) Approved construction drawings b) Design reports and specifications c) Structural Certification of the Construction works.

	The design 'deficiencies' outlined under ANNEXTURE I: 'GAP' Analysis Report shall be addressed prior to the issuing of Approved construction' drawings. The appointed <i>Contractor</i> shall take ownership and design all required structural works for the new cable route.	
Civil works	The appointed Contractor shall have a qualified and experienced ECSA Civil Engineer/Technologist to take ownership and design the following, but limited to, Civil Engineering items: - Bulk Services design (water, sewer, etc) - Stormwater design - Platform design includes earthworks, access point and foundation details. - Pipe and Chamber design (cable route that aligns with the proposed electrical routing). The Contractor shall ensure that the Civil Design aligns with all the affected parties including, the Employer's Operational and Maintenance team.	a) Design reports and specifications b) Bill of Quantities c) Approved construction drawings d) Civil Certification of the complete Construction works.
HVAC System Fabrication and associated drawings.	The Contractor shall provide workshop drawings and details. The Contractor shall provide a proposed fabrication method statement complete with Fabrication Quality Plan	a) Specifications for all items of Plant b) O&M Manuals c) Detailed Fabrication and workshop drawings
Electrical Works	The appointed Contractor shall have a qualified and experienced ECSA Civil Engineer/Technologist to take ownership and design the following, but limited to, Electrical Engineering items: - New protection and integration of the proposed substation into existing infrastructure.	a) Calculations/ Software Simulations b) Protection Study report with settings c) Drawings
	- Earthing and lightning protection systems for the substations.	a) All design drawings and Specifications b) Design report c) Soil resistivity tests.

	Identify and detail the cable routing for the following but not limited to: - MV (11.75kV) Main Supply cable. - MV (3.3kV) Cables from 3.3kV to 3.3kV MCC within the pump station. - LV cables to feeds the LV loads within/along the Sturrock Dry dock areas - Cable management system within the tunnel	a) Detailed drawings b) Cable specification
	- Detailed Design, supply installation of Dry Type Transformer.	
Design, supply, install, test and Commission of Fire Stops	The Contractor shall Design, supply, install, test and Commission of Fire Stops, as per Mechanical Specification (XCTE-0021-ENG-M-SP-0005_Sturrock Dry Dock_Fire Stop Suppression Technical Specification_Rev0A), as a minimum requirement	a) Detailed design of Fire Stop systems for all penetration between compartments in the substation. OEM manuals and Maintenance plans.
Full software verification of Gas Suppression System	The Contractor shall ensure that the gas suppression system installed has undergone a full computer simulated verification by an approved FK-5-1-12 provider and installer. This shall include, but not be limited to, pipe sizing, nozzle sizing, pipe lengths, and all auxiliary equipment needed for the effective performance of the system as per The Employers Design.	a) Detailed workshop installation design as per an approved provider and installer. b) OEM manuals, maintenance plans, and critical spares list.
Room integrity for Gas Suppression and Fire Protection	Contractor is to design the enclosures for each room to be sealed and shall be able to provide a hold time for gas suppression of minimum 10minutes as per SANS 14520-5. The Contractor shall especially ensure that all doors (including exterior doors) are designed to be fire and smoke barriers and shall be sealed to accommodate the gas suppression sealing requirements.	a) Detailed workshop installation design as per an approved provider and installer. b) OEM manuals, maintenance plans, and critical spares list
Desing, supply, install, test and Commission	All supporting infrastructure required to implement all the Employers' designs, including but not limited to pipe supports or bridges,	

	plant bases or plinths, plant supports and fixings;	
Desing, supply, install, test and Commission	All mechanical system's control systems as outlined in The Employers Mechanical Specification pack of documents, necessary for the provision of the works;	
Desing, supply, install, test and Commission	All filtration, insulation and acoustic silencing plant as outlined in The Employers Mechanical Specification pack of documents, necessary for the provision of the works;	
Desing, supply, install, test and Commission	Emergency and fire evacuation drawings and signage as per SANS 23601 / 10400 / 1186 1-5.	
Desing, supply, install, test and Commission	All workshop, drawings for the proposed HVAC system, and verify duct routing and clashes as well as fan position. All of this shall be verified by The Engineer before installation commences.	
Supply, install, test and Commission	All drawings which depict the full HVAC, fire suppression and detection system, these drawings are to be full as-built drawings.	
Mechanical testing and retesting	The <i>Contractor</i> shall test and commission the systems in line with the guidelines as per the Works Information as well as the manufacturer's requirements and industry best practices. All testing shall be third party independent testing, including but not limited to door fire rating, door pressure rating, door smoke and gas integrity, extract and supply air systems, pressure relief vent and fire damper testing. Test certificates shall be provided to the <i>Employers Engineer</i> for acceptance. Failure of any tests shall be rectified as per third part recommendation, while any and all retesting and commissioning shall then be at the full cost to the <i>Contractor</i> . Retesting and Certification with a pass shall then be submitted to the Employers Engineer for acceptance. Timeline for retesting and recommissioning shall be discussed with and approved by the <i>Project Manager</i>	

2.2.5 **Contractor is responsible in his design for the overall integration of the design of the works with the design of the Employer as stated under 2.1 Employer's design above for the following parts of the work**

- i. The *Contractor* shall, undertake to familiarise themselves of the detailed design completed by the Managing Contractor in the previous stage. To foster the participation and cooperation of all stakeholders in the detailed design review, the *Contractor* shall participate in a one- or two-day workshop facilitated and arranged by the Managing Contractor who will present to all the relevant stakeholders who will be present, and the project team.
- ii. Following the familiarisation of the detailed design the Contractor will present his selection of Original Equipment Manufacturer (OEM's) for the different systems of the infrastructure.
- iii. The Contractor shall necessarily subject the *Employer's* Detailed Design to a full Hazards and Constructability (HAZCON) workshop; the purpose of which is to pre-empt and mitigate any and all risks that may be associated with the safe constructability of works. The *Contractor* shall employ a suitably qualified and independent HAZCON facilitator and arrange for a suitable conference venue within the City of Cape Town over a duration of not less than 2 days. The *Contractor* should include for catering in their pricing and accommodate for delegates not less than 15 from the *Employer's* personnel. The HAZCON deliverables shall be a HAZCON report complete with conclusions and recommendations ranked according to criticality and urgency. This report shall be signed and approved by the HAZCON facilitator and state clear accountability of risks.
- iv. The Contractor is required to provide all materials, facilities and samples for any tests required in for the finalisation of all systems as per The Employers specifications
- v. Samples, tests, and inspections required of the Contractor, shall be as specified in the Employers technical specifications supplied with this document.
- vi. The Contractor shall furnish samples of any that is other than, or different to, that specified by the Employer's Engineers, to the Supervisor for Acceptance by the Employer's Engineers. The Contractor is prohibited from installing said without the required prior authorization from the Employer's Engineers.
- vii. The Contractor shall furnish samples of any that is proposed to be used in the Contractor's Designs to the Supervisor for Acceptance by the Employer's Engineers. The Contractor is prohibited from designing with, and subsequently installing said without the required prior authorisation from the Employer's Engineers. The Employer will not provide any material or facilities for the use of the Contractor, to perform tests or inspections.
- viii. The Contractor shall give notice to the Supervisor of the required inspection not less than 48 hours before the inspection is required.
- ix. Where these activities require the involvement of the Employer's Engineers or any other stakeholders, the Contractor is required to make these arrangements with due consideration of the availability of the required personal and provide sufficient notice for travel arrangements to be arranged.
- x. The anticipated workshops shall as a minimum have the following stakeholders present:

Table 11. Anticipated Workshops

<u>Workshop</u>	<u>Stakeholders</u>
Review of Detail Design, including acceptance of certified OEM General Arrangement Drawings.	• <i>Employer's Managing Contractor,</i> • <i>Employer's Engineers,</i> • <i>Employer's SHEQ and Fire Department personnel.</i> • <i>Employer's Operation and Maintenance personnel.</i> • <i>Contractor</i>
Presentation, Selection and Acceptance of critical Original Equipment Manufacturer (OEM) equipment, including, but not limited to: 1. Bulk Electrical Power Supply Systems 2. Control Systems 3. HVAC Systems 4. Fire Detection and Suppression Systems	• <i>Employer's Managing Contractor,</i> • <i>Employer's Engineers,</i> • <i>Employer's Operation and Maintenance personnel.</i> • <i>Employer's SHEQ and Fire Department personnel.</i> • <i>Main Contractor</i>
HAZCON Workshop	• <i>Employer's Managing Contractor</i> • <i>Employer's Health and Safety Agent</i> • <i>Employer's Environmental Control Officer</i> • <i>Employer's Engineers,</i> • <i>Employer's Operation and Maintenance personnel,</i> • <i>Employer's Safety, Health and Environment (SHE) specialists</i> • <i>Main Contractor</i>

2.3 Procedure for submission and acceptance of Contractor's design

2.3.1 The *Contractor* shall address the following procedures:

- i. The *Contractor's* design shall be submitted as part of the Tender Submission and will be evaluated at the Technical Evaluation stage in line with the *Employer's* requirements and specifications in this document.

2.3.2 Documentation Submission:

The *Contractor's* documentation shall be issued to the Project Manager under cover of the *Contractor's* Transmittal Note stating all contract references (i.e. Project No, Contract No, etc.) as well as the

Contractor's Project Document Number, Revision Number, Title and chronological listing of transmitted documentation.

Formats of Contractor data submitted are dependent on the project procedure and shall be specified by the Project Manager, upon the notified request of the Contractor.

The Contractor's Transmittal Note must state the purpose of the submission. Documentation for different purposes must be sent on separate transmittals.

All electronic documentation shall be submitted by the Contractor in Adobe Acrobat (PDF) and native file format, with drawings in 'rvt', 'dgn', 'dxf', 'dwg' or similar approved formats as requested by the Employer.

The Contractor shall also provide any design package software files to the Employer, in the format specified by the Employer, if so requested, in order to review and/or verify drawings and designs.

The Contractor shall submit their designs to the Project Manager for approvals before commencing with any manufacturing or construction.

The Contractor undertakes design safety reviews with the Project Manager, the NEC Supervisor, the Employer's Engineer's and Professional team, the Employer's Health and Safety Officers, the *Employer's* Environmental Officers, the *Employer's* Quality Assurance and Quality Control Officers and any other Specialists and/or Subject Matter Experts (SME) as deemed by the *Employer* necessary for the provision of the Works.

In undertaking the 'Works' (including all incidental services required), the Supplier shall conform and adhere to the requirements of the '*Contractor* Document Submittal Requirements' Standard included in Annexure B (Refer DOC-STD 0001).

2.4 Review and Acceptance of Contractor Documentation

2.4.1 The *Contractor* submits documentation as the Works Information to the *Project Manager* for review and acceptance.

2.4.2 The *Project Manager* may withhold acceptance of a submission if the document submission requirements stated in the Works Information are not adhered to.

2.4.3 The *Contractor* shall allow the *Project Manager* two weeks (unless otherwise stated and agreed) to review and respond to the *Contractor's* submission of their documentation, i.e. from time of receipt by the *Employer* to the time of despatch to the *Contractor*. However, work shall proceed without delay in the event of late return of the documentation by the *Project Manager* with prior notification in writing by the *Contractor*.

2.4.4 After review by the *Employer*, a copy of the original reviewed/marked-up drawing/document, with the *Project Manager's* consolidated comments and document status marked on the *Contractor's* review label, will be scanned and the hard copy will be returned to the *Contractor* under cover of the project's transmittal note for revision or re-submittal as instructed.

2.4.5 The *Contractor* will be advised by e-mail (accompanied by a copy of the project's Transmittal Note) that documentation is available for their collection.

2.4.6 On receipt of the reviewed documentation, the *Contractor* shall make any modifications as requested or marked up and resubmit the revised documentation to the *Project Manager* within two weeks. Queries regarding comments or changes shall be addressed with the *Project Manager* prior to re-submittal.

2.4.7 Any re-submittals, which do not include the changes or comments as indicated by the *Employer*, will be returned to the *Contractor* to be corrected. The *Contractor* shall re-issue the revised documentation incorporating all comments and other specified details not included in the previous issue within two working days of receipt of the marked-up document.

2.4.8 The *Contractor* issues method statements in advance of carrying out items of work. The *Contractor* allows the period for reply for acceptance of method statements. Work does not commence until the *Supervisor* has accepted the relevant method statement. The *Contractor* does the work in accordance with the accepted method statement.

2.5 Other requirements of the Contractor's design

2.5.1 The Contractor is required to provide all materials, facilities and samples for any tests required in for the finalisation of all systems as per The Employers specifications

2.5.2 Samples, tests, and inspections required of the Contractor, shall be as specified in the Employers technical specifications supplied with this document.

2.5.3 The Contractor shall furnish samples of any that is other than, or different to, that specified by the Employer's Engineers, to the Supervisor for Acceptance by the Employer's Engineers. The Contractor is prohibited from installing said without the required prior authorization from the Employer's Engineers.

2.5.4 The Contractor shall furnish samples of any that is proposed to be used in the Contractor's Designs to the Supervisor for Acceptance by the Employer's Engineers. The Contractor is prohibited from designing with, and subsequently installing said without the required prior authorisation from the Employer's Engineers. The Employer will not provide any material or facilities for the use of the Contractor, to perform tests or inspections.

2.5.5 The Contractor shall give notice to the Supervisor of the required inspection not less than 48 hours before the inspection is required.

- i. Where these activities require the involvement of the Employer's Engineers or any other stakeholders, the Contractor is required to make these arrangements with due consideration of the availability of the required personal and provide sufficient notice for travel arrangements to be arranged.

2.6 Use of Contractor's design

2.6.1 The *Contractor* grants the *Employer* a license to use the copyright in all design data presented to the *Employer* in relation to the works for any purpose in connection with the construction, reconstruction, refurbishment, repair, maintenance, and extension of the works, with such license being capable of transfer to any third party without the consent of the *Contractor*.

2.6.2 The *Contractor* vests in the *Employer* full title to the intellectual property and copyright in the design data created in relation to the works, irrespective of where or what those works may be.

2.6.3 The *Contractor* grants the *Employer* a non-exclusive license, in accordance with the provisions of Section 22 of the Copyright Act 1978, to copy any document/calculation compiled/done by the *Contractor* in connection with the Works, to make free and unrestricted use thereof for his own purposes, modify some or having it modified by a third party for any reasons, to provide copies thereof to a third party (*Contractors* or *Consultants*) of the *Employer* to be used by them for the purposes of tendering or consultancy.

2.6.4 Furthermore, if any such document/calculation by any Principal *Contractor* or *Subcontractor* is used for the Works, the *Contractor* requests such Principal *Contractor* or *Subcontractor* to grant to the *Employer* a similar non-exclusive license for the purposes set out herein.

2.7 As-built drawings, operating manuals and maintenance schedules

2.7.1 The *Contractor* provides the following:

- i. The *Contractor* prepares two (2) marked-up hard copies of the latest revision of the *Employer's* documents/drawings to represent the as-built/final state.
- ii. The mark-ups shall be in RED and be complete and accurate. The *Contractor* submits the same to the *Project Manager* under cover of a *Contractor's* Transmittal Note.
- iii. The *Contractor* provides manuals in an A4 hard-covered, red, grease, and waterproof binder, using 2-ring type binders. The manuals are well-indexed and user-friendly and include a summarized Table of Contents.

- iv. Drawings and charts larger than A4 are folded and those greater than A3 are enclosed in an A4 plastic pocket of adequate strength.
- v. The *Contractor* submits the draft Table of Contents to the *Project Manager* for acceptance prior to the compilation and official submittal of the manuals.
- vi. The originals of all brochures shall be issued to the *Project Manager*. When a general brochure applies to a range of equipment, then the specific item, catalogue number, or model number shall be stated, which is best achieved by introducing a separate index page, which cross-references the specific item to a tag number.
- vii. Where manuals include drawings that still need to be revised to 'as-built' status, and such manuals are required prior to 'as-built' status, the manual will not be considered to be in its final form until the 'as-built' version of each such drawing has been incorporated. The required number of copies of the manual(s) shall be as specified by the *Project Manager* and submitted per type or model number of equipment included in the contract, or as specified by the *Project Manager*. A typical example of what the binder/file(s) shall be marked with on the spine and the front cover is as follows:

- Project name and number
- Manual title, e.g. Installation, Maintenance, and Operating Manual
- Manual numbering (e.g. Volume 1 of 2, etc.)
- Contract number
- Contractor name

Unless otherwise stated, the required number of copies of all as-built/final/data packs shall be:

- 3 x hard copies (full size)
- Adobe Acrobat (.pdf) and "Native" formats

2.7.2 As-built/final documentation

In undertaking the works (including all incidental services required), the *Contractor* shall conform and adhere to the requirements of the '*Contractor* Document Submittal Requirements' Standard included in Annexure B (Refer DOC-STD 0001).

3 Construction

3.1 Temporary works, Site services & construction constraints

- 3.1.1 The Contractor complies with the Employer's site entry and security control, permits, and site regulations

The Port of Cape Town is a designated security area as per the ISPS requirements. Consequently, all access to the Port is strictly controlled. The *Contractor* shall comply with all the requirements of the *Employer* with regard to site entry. The cost of complying with this access security, including labour transport and access requirements and maintaining access cards for staff working on the site are included in the tendered price.

The *Contractor* complies with the following:

- i. The *Contractor* shall obtain the necessary entry permits for all staff working within the area in accordance with the access control requirements of the *Employer* and shall issue each personnel member with an appropriate identification card.
- ii. The *Contractor* identification cards shall detail the individual's name and identity number. All costs incurred in providing construction personnel with ID cards shall be borne by the *Contractor* and shall be made by the *Contractor* to a standard acceptable to the *Project Manager*.
- iii. The *Contractor* is also required to obtain the relevant permits for his *Subcontractors* and all *Suppliers*. The *Contractor* is required to make applications for these permits on behalf of his workers, *Suppliers*, and *Subcontractors*. The *Contractor* is to make a cost and time allowance for obtaining the necessary permits.
- iv. Each of the *Contractor's* employees shall undergo a medical examination, certifying that the employee is fit and capable of undertaking the assigned tasks, as applicable.
- v. All people working within the Port are to undergo an induction on the port's health and safety, security, and general procedures. The cost of the induction will be for the *Contractor's* account. The *Contractor* is to allow for a minimum of one day for the induction period.
- vi. The minimum personal protective equipment (PPE) requirements for any of the *Contractor's* employees within the port boundaries shall include hard hats, safety vests, and safety boots. Where special circumstances dictate this, or as per the *Contractor's* activity-based risk assessment, or where so advised by the *Employer*, the *Contractor* shall also provide his employees with, but not limited to, ear protection, eye protection, dust masks, safety harnesses, and life jackets.
- vii. All drivers of vehicles using the port operational roads shall undergo an induction course to familiarise them with the terminal layout and the applicable regulations.
- viii. Each of the *Contractor's* employees shall have a valid police clearance certificate.
- ix. The *Contractor* is responsible for the security of the works until completion and hand-over and must make arrangements for security and the safekeeping of his property. The *Contractor's* watchmen are allowed on site for this purpose.
- x. The *Contractor* is to be in constant consultation with the Port's security operations to ensure compliance with all the required security procedures.

3.1.2 Restrictions to access on Site, roads, walkways and barricades.

The *Contractor's* staff shall be confined to the working area and defined access routes and shall not be allowed to be present in other areas of the *Employer*. *Contractor* staff found disobeying this instruction will be subject to disciplinary action.

The *Contractor* complies with the following requirements of the *Employer*:

- i. Access to the area where the *Contractor* is working is to be strictly controlled and will be restricted to construction traffic only. No access will be given to private vehicles or public transport and, in this regard, the *Contractor* is to make provisions for transporting his labourers in from an external meeting/collection point.
- ii. The *Contractor* shall provide adequate transport for all staff members between the construction site and the *Contractor's* yard, as well as transport to and from work.

3.1.3 Site management, traffic management, and site delivery

- i. The *Contractor* is required to establish a well-planned site management system. To achieve this, the *Contractor* will provide a comprehensive well-planned work method and schedule followed by the submission of a detailed risk assessment for approval and implementation.
- ii. The *Contractor* shall develop a traffic management plan to ensure safety in construction as well as with the interface with operations.
- iii. The *Contractor* shall plan the delivery of equipment and materials to site accordingly, minimizing the amount of material on site. The *Contractor* shall be responsible for temporarily upgrading the access route should the *Contractor* deem it necessary for the delivery of the *Contractor's* Equipment and/or Materials to site.
- iv. The *Contractor* shall be responsible for ensuring the safe passage of construction traffic to and around the site at all times. The *Contractor* shall not traverse any areas outside the immediate vicinity of the construction site(s) or designated access routes approved by the *Project Manager*. Any person(s) found contravening these restrictions will be subject to disciplinary action and may be instructed to be removed off site.

3.1.4 People restrictions on Site; hours of work, conduct and records:

The working hours shall be in accordance with the requirements of the Department of Labour and basic conditions of employment. This information relating to working hours shall be supplied to the *Project Manager*, prior to commencement of the proposed working hours. Normal working hours shall be Monday to Friday 07h00 – 17h00. If the *Contractor* requires working extended hours, a formal request shall be submitted to the *Supervisor* for approval. The cost incurred by the *Employer* to accommodate extended

hours may be for the *Contractor's* account. External lighting shall be directed at the working areas and not away from the site. Staff, with the exemption of security personnel, shall not remain on the site overnight without the agreement of the *Project Manager*.

3.1.5 The *Contractor* keeps daily records of his people engaged on the Site and Working Areas (including Subcontractors) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.

3.1.6 Health and safety facilities on site

At all times during construction, the *Contractor* is responsible for the safety of all persons on site and shall have the necessary systems and procedures in place to effectively manage this in relation to health and safety requirements in addition to those of the Occupation Health and Safety (OHS) Act 85 of 1993.

3.1.7 Environmental controls, fauna & flora, dealing with objects of historical interest

The *Contractor* shall perform the works and all construction activities within the site and working areas having due regard for the environment and environmental management practices.

3.1.8 Title to Materials from demolition and excavation

- i. The *Contractor* has no right to any materials arising from demolitions if such material is to be re-used and re-incorporated into the new works and is required for the completion of the works as specified in the Works Information or Pricing Instructions. The title to such materials remains with the *Employer*. The *Project Manager* shall instruct the *Contractor* how to label, mark, set aside, and/or dispose of such materials for the benefit of the *Employer* in accordance with NEC3 ECC Clause 73.1.
- ii. Where such materials become available for spoiling the *Project Manager* shall instruct the *Contractor* how to label, mark, set aside, and/or dispose of such materials for the benefit of the *Employer* in accordance with NEC3 ECC Clause 73.1.

3.1.9 The *Contractor* Cooperating with and obtaining acceptance of others

3.1.10.1 The *Contractor* must make allowance for the necessity to interface with the activities of others including the *Employer*, *Project Manager*, *Others* appointed by the *Employer*, and any other 3rd party stakeholders, to allow smooth, uninterrupted construction, mitigate risk which could cause, and where possible completely avoid, delays in construction between *Contractors* and to allow for safe access and working conditions.

3.1.10.2 The *Contractor* shall organize the work to cause the least possible inconvenience to other construction activities or operations at the site. Access for *Others* to adjacent areas shall be maintained at all times. Temporary access points shall be provided for the *Employer*.

3.1.10.3 The *Contractor* shall be responsible for his construction programme, which shall be subject to approval by the *Employer* and *Project Manager*. *Contractors* shall be deemed to have allowed in their tender for any additional cost to be incurred due to the foregoing. No claims for extra costs for coordination and cooperation with *Others* will be entertained.

3.1.10.4 The *Contractor* shall manage all persons executing the works, including all *Subcontractors*/OEMs and *Suppliers* undertaking temporary or permanent works, or supplying Plant and Materials to site.

3.1.10 Publicity and progress photographs

The *Contractor* shall obtain the permission and approval of the *Employer* before erecting any notice boards, using the details of the contract in any advertising media, or revealing any details of the contract to the public. The *Contractor* does not advertise the contract or the project to any third party, nor communicate directly with the media (in any jurisdiction) whatsoever without the express written notification and consent of the *Project Manager*.

3.1.11.1 The site establishment area shall be clearly sign posted and be compliant with the relevant safety regulations and restrictions that might be in place until the Contractor has de-established from site.

3.1.11.2 The Contractor provides a comprehensive photographic record of the progress of the works by taking photographs at weekly intervals. The initial photographs are to be taken at the start of the project, immediately prior to the commencement of any work. As far as possible each set of photographs shall be taken from the same locations as the previous set.

3.1.11.3 The areas to be photographed and the number of photographs in each area will be determined by the Project Manager.

3.1.11.4 Photographs are to be submitted in JPEG format, with a minimum resolution of 1200 x 800. Each set of photographs must be accompanied by an index showing:

- Contract reference
- Photograph file reference
- Date of photograph
- Subject matter

3.1.11 The *Contractor* keeps daily records of his Equipment used on Site and the Working Areas (distinguishing between owned and hired Equipment) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.

3.1.12 The *Contractor* within fourteen (14) days after completion, must completely remove from site all his plant, materials, equipment, stores, temporary accommodation, or any other asset belonging to him and leaves the site in a tidy condition to the satisfaction of the *Project Manager*. The site must be left in a similar or better condition than during occupation. No excess or discarded materials, plants, or stores may be buried or dumped within the *Employer's* boundaries.

3.1.13 Equipment provided by the *Employer*

The *Employer* does not provide any Equipment for the *Contractor*.

3.1.14 Site services and facilities:

No connection points for electricity power supply are available on site. The *Contractor* shall make arrangements for the connection of electricity power supply to his work site. The position of the existing supply connection points for water, if available, is to be indicated by the *Project Manager*. The *Contractor* is to make arrangements for the connection of such services to his working areas, for his use during construction. Where such services are purchased from the Port, the applicable tariffs will be those that the Local Authority charges the Port and shall be obtained by the *Contractor*. There is no water-borne sewage facility available. The *Contractor* shall provide everything else necessary for providing the works.

3.1.15 The *Employer* provides the following facilities for the *Contractor*:

- i. The site and access to the site will be made available to the *Contractor* for the duration of the works, subject to the limitations provided in this Works Information.
- ii. Yard and laydown areas

The *Contractor* may establish a yard and laydown areas as indicated under Part C4 - Site Information.

The provision of utility services shall be as detailed in the Site Information.

The *Employer* will not provide any further designated space on site for the establishment of offices, workshops, storage areas, or the like. The *Contractor* may however liaise with the *Employer* and *Others* engaged in concurrent construction activities to obtain their consent for temporary storage of materials and equipment outside of the designated yard and laydown areas. This will be at the sole risk of the *Contractor*.

The *Contractor* shall ensure that the areas are properly fenced and secured at all times and shall provide all access control. The areas may only be used for the storage of materials, temporary sanitation facilities, and other essential activities required for the works.

Accommodation of the *Contractor's* staff at the yard and laydown areas will not be permitted. The *Contractor* may retain 24-hour security at the yard and laydown areas, provided that proper temporary sanitation and shelters are provided.

Wherever the *Employer* provides facilities (including, inter alia, temporary power, water, waste disposal, telecommunications, etc.) for the *Contractor's* use within the working areas and the *Contractor* adapts such facilities for use, then the *Contractor* makes good and provides full reinstatement to the land (including all apparatus of the *Employer* and *Others* in, on or under the land) and surrounding areas to its original standard upon dismantling of such facilities and hand-back to the *Employer*.

3.1.16 The *Contractor* provides the following facilities for the *Project Manager* and *Supervisor*:

3.1.17.1 Wherever the *Contractor* provides, maintains, moves to new positions as required, and finally removes proper portable toilets of sufficient number at his cost. Toilets are to be properly constructed and placed in suitable positions and maintained in a clean and sanitary working condition. Where no suitable connection to a sewerage system is feasible, conservancy tanks or chemical-type toilets may be used. The *Contractor* shall make arrangements with the Local Authority for the disposal of night soil at his cost.

3.1.17 Unless expressly stated as a responsibility of the *Employer* as stated under Section 3.1.13, all residual requirements for the provision of facilities and all items of equipment necessary for the *Contractor* to provide the works remain the responsibility of the *Contractor*.

3.1.18 Existing premises, inspection of adjoining properties and checking work of *Others*.

The *Contractor* shall visit the site of the proposed works and acquaint themselves with the nature of the works, the conditions under which the works are to be performed, the means of access to the site, and all further matters that may influence or affect the execution of the works.

3.1.19 Survey control and setting out of the *works*

Any topographical survey carried out as part of the works shall be undertaken by a SAGC registered surveyor, to be appointed by the Contractor, and to be approved by the Employer.

The Contractor shall appoint such a competent surveyor to properly set out all works prior to installation, as well as after installation for as-built documentation purposes. Should the Project Manager be unsatisfied with the setting out or any other associated survey details, he may request that an additional surveyor be appointed to validate all coordinates.

3.1.20 The *Employer* provides the following information and survey controls for the *Contractor*:

- i. Survey reference points will be provided by the Employer. The Contractor shall, within two weeks after the site has been handed over to him, ascertain the correctness of all surveys and reference points. Any discrepancy shall immediately be reported in writing to the Employer. Any costs arising from discrepancies that were not reported to the Employer within the aforementioned period shall be the sole responsibility of the Contractor.

- ii. 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 Employer. 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.
- iii. The cost of replacing any beacons displaced or destroyed during the contract without the consent of the Employer shall be to the Contractor's account.
- iv. The Contractor is to note that the coordinates shown on all drawings relate to the WGS 84 survey system. A local system using Lo25 has been used for this project.

3.1.21 Excavations and associated water control

It is the responsibility of the *Contractor* to ensure that all excavations are rendered safe and suitable for construction and conform to the requirements of the Construction Regulations (CR 13). The *Contractor* shall not continue construction in conditions that the *Project Manager* does not approve of. The *Contractor* will be required to design and submit for approval the methods of excavation.

3.1.22 The *Contractor* complies with the following requirements

- i. The Contractor shall consult the Project Manager prior to undertaking any excavation work.
- ii. All excavations deeper than 1.5 m below ground level shall either be fully shored or the sides shall be battered back to a safe angle as determined by the strength of the soil and approved by the relevant competent person appointed in writing in terms of the Occupational Health and Safety Act 85 of 1993. An evaluation of the stability of the ground, as far as reasonably practicable, is to be undertaken prior to excavation.
- iii. The Contractor shall be responsible for the protection of the works including the provision of the temporary drainage works such as drains, open channels, and banks, and providing and operating temporary pumps and such other equipment as may be necessary for adequately protecting and dewatering the works. Work performed by the Contractor as part of the protection of the works shall be deemed included in the tendered rates for the various items captured in the pricing document.
- iv. The Contractor shall obtain all the necessary work permits before starting any excavations in accordance with health and safety procedures.

- v. The Contractor shall be liable for all claims arising out of any damage caused by such excavation if the Contractor fails to exercise the requisite care and attention in carrying out the excavation.
- vi. The control of water during construction, including in particular dewatering of deep excavations, shall be managed and controlled in accordance with method statements to be compiled by the Contractor and approved by the Project Manager prior to the commencement of the works. These method statements shall include all measures that are required to remove or mitigate adverse environmental impacts. The Contractor will only be allowed to construct such drainage water control systems once the method statement is approved by the Project Manager.

3.1.23 Underground services, other existing services, cable and pipe trenches and covers

3.1.24.1 No excavations shall be done within and outside the port area, as applicable, in the absence of a written permit, to be issued by the port authorities and other relevant parties. The Contractor shall also ensure that any other required permits to excavate are in place.

3.1.24.2 The Contractor is required to liaise with the Project Manager or Supervisor and establish as accurately as possible, the location of the various existing services situated within the working areas and record all such information on a suitable 'marked-up' drawing for reference at all times. As far as possible, existing services have been shown on the drawings included in this contract. The drawings showing the existing services are supplied as a guide only.

3.1.24.3 The Contractor must thereafter exercise due care and attention in carrying out the agreed excavation work as may be directed by the Project Manager to avoid damage or disruption to existing services.

3.1.24.4 Where any live, existing, or new services are anticipated, the Contractor shall excavate by hand trial pits and proving trenches. Prior to commencing with such hand excavations, the Contractor shall provide detailed and specific method statements, risk assessments, and the like for approval by the Employer.

3.1.24.5 Care shall be taken by the Contractor to protect all existing services unless they are confirmed to be abandoned. The same care shall apply to any new services.

3.1.24.6 If any existing and/or new service is damaged, that should have been located or protected by the Contractor, the Contractor shall be required to carry the cost of the repair of that service.

3.1.24.7 Should any service be damaged by the Contractor, it is the responsibility of the Contractor to report such damage to the Project Manager immediately.

3.1.24 Where the *Contractor* encounters existing **underground services / existing services cables**

- i. Immediately notify the Project Manager, relevant utility owners, or officials of the located service.
- ii. Ascertain whether the service is still required and must remain live, or whether the service has been abandoned.
- iii. If the service is confirmed as abandoned, the Contractor shall remove such service, if so instructed by the Employer.
- iv. If the service is deemed live, it shall be protected by the Contractor and marked on the specific record drawing(s) for that area or service discipline. The service shall be demarcated by the placement of brightly painted wooden stakes to provide clear visibility of such services to the construction teams and others working in the area

3.1.25 Control of noise, dust, water and waste

The Contractor shall take all reasonable steps to contain unacceptable levels of noise and dust, in accordance with the specified and referenced environmental, health and safety requirements. The control and disposal of water and waste must be expressly stated and approved by Project Manager prior to any of these activities taking place.

3.1.26 The *Contractor* complies with the following:

- i. The Contractor is to provide dust suppression as per the CEMP, PES and SES documents to ensure that dust levels resulting from the Contractor's construction traffic are kept to the required safety and environmental standards as specified in the relevant project environmental specifications.
- ii. The control of water during construction, including in particular drainage of deep excavations, shall be managed and controlled in accordance with method statements to be compiled by the Contractor and approved by the Project Manager prior to the commencement of the works. These method statements shall include all measures that are required to remove or mitigate adverse environmental impacts.

- iii. The Contractor shall dispose of all waste products at an appropriately licensed and registered waste disposal site, to be approved by the Project Manager. The Contractor shall provide written proof that all permits for the waste disposal site are in place. Waste may not be disposed of at the designated stockpile area, as described in Part C4 – Site Information.
- iv. All ferrous materials emanating from the works shall be stockpiled at a designated stockpile area, as described in Part C4 – Site Information, or as otherwise advised by the Project Manager. The ferrous materials will remain the property of the Employer.

3.1.27 Giving notice of work to be covered up

The *Contractor* shall notify the *Supervisor* prior to covering up any of the completed works, to allow the *Supervisor* time for inspection of those works. This notification is given not less than 48 (forty-eight) hours prior to the proposed covering up.

3.1.28 The *Contractor* complies with the following constraints in the execution of the *works*:

The existing Sturrock Dry Dock is operation area and the need to allow existing contractors and ship repairs stakeholders will be in operation during the construction period. Cooperation to allow site access and for TNPA stakeholders to gain access to certain areas with SDD will be required .

3.2 Completion, testing, commissioning and correction of Defects

3.2.1 The *work* to be done by the Completion Date

On or before the Completion Date the Contractor shall have done everything required to Provide the Works including the work listed below which is to be done before the Completion Date and in any case before the dates stated. The Project Manager cannot certify Completion until all the work listed below has been done and is also free of Defects, which would have, in his opinion, prevented the Employer from using the works and Others from doing their work.

Table 1: Submission Completion Durations

Item of work	To be completed by
Submission of all data packs, quality assurance records and as-built drawings	30 days after Completion
Submission of all As-built drawings	30 days after Completion

3.2.2 Materials facilities and samples for tests and inspections

- i. The Contractor is required to provide all materials, facilities and samples for any tests required in Item 3 Plant and Material Standards and Workmanship below.
- ii. Samples, tests, and inspections required of the Contractor, shall be as specified in the technical specifications and in section C4 of this document.
- iii. The Contractor shall furnish samples of any that is other than, or different to, that specified by the Employer's Engineers, to the Supervisor for Acceptance by the Employer's Engineers. The Contractor is prohibited from installing said without the required prior authorization from the Employer's Engineers.
- iv. The Contractor shall furnish samples of any that is proposed to be used in the Contractor's Designs to the Supervisor for Acceptance by the Employer's Engineers. The Contractor is prohibited from designing with, and subsequently installing said without the required prior authorisation from the Employer's Engineers. The Employer will not provide any material or facilities for the use of the Contractor, to perform tests or inspections.
- v. The Contractor shall give notice to the Supervisor of the required inspection not less than 48 hours before the inspection is required.
- vi. Where these activities require the involvement of the Employer's Engineers or any other stakeholders, the Contractor is required to make these arrangements with due consideration of the availability of the required personal and provide sufficient notice for travel arrangements to be arranged.
- vii. The Employer will not provide any materials or facilities for the use of the Contractor, to perform tests and inspections.

3.3 Pre-Commissioning Tests and Commissioning

- 3.3.1 The Contractor shall arrange for Factory Acceptance Testing (FATs) of all Electrical and Mechanical plant at the Supplier's Premises before any is dispatched to Site. The Factory Acceptance Testing shall be witnessed by the Employer's Engineers, but in doing so, the Employer's Engineers assume no responsibility or accountability for the proper functionality of Plant in any way whatsoever.
- 3.3.2 The Contractor shall arrange for Site Acceptance Testing (SATs) for the plant when it arrives on site. The Site Acceptance Testing shall be witnessed by the Employer's Engineers, but in doing so, the Employer's Engineers assume no responsibility or accountability for the proper functionality of Plant in any way whatsoever.
- 3.3.3 Simulations and Testing of Plant and Systems required of the Contractor, shall be specified in the technical specifications and in section C4 of this document.
- 3.3.4 The cost of FATs and SATs shall be included in the Contractor's price. Testing and Commissioning is considered part of the works and is to be done before completion.
- 3.3.5 The installation shall be comprehensibly tested and commissioned as individual and integrated systems as may be required by the configuration, after the works are substantially complete.
- 3.3.6 The Contractor shall provide adequate and competent personnel for testing and commissioning of every installation and for the full duration of the commissioning process.
- 3.3.7 The commissioning shall include interaction between other services and Contractors where interdependence of installations is encountered.

- 3.3.8 The commissioning process shall, after all testing's has been completed be the final proving ground of the systems and during this procedure the installations shall be subjected to all possible inputs and actions which may be encountered under operational conditions. The Contractor shall prove the full operation, working and compliance of the installation in accordance with the specifications.
- 3.3.9 The Contractor shall provide the Project Manager with 2 weeks prior notice of all Testing and Commissioning activities to be undertaken.
- 3.3.10 The mechanical testing and commissioning shall be done as per the guidelines found in section 4.5.
- 3.3.11 The Contractor shall provide a detailed testing and commissioning plan which shall be approved prior to the start of any testing activities.
- 3.3.12 The commissioning programme shall include:
 - i. A schedule of plant to be commissioned, the proposed tests to be conducted and the testing methods and the range of acceptable results.
 - ii. Commissioning check sheets; and
 - iii. Commissioning programme dates and duration.
- 3.3.13 The Contractor shall supply all relevant test equipment, monitoring devices, network analysers, protocol testers/analysers etc. required to test and commission the complete works.
- 3.3.14 An accurate record of all commissioning and testing is to be taken and included in the handover documentation as a permanent record.

3.4 Take over procedures

- 3.4.1 Access given by the Employer for correction of Defects
- 3.4.2 The *Contractor* complies with the following constraints and procedures of the *Employer* where the *Project Manager* arranges access for the *Contractor* after Completion:
 - i. Access into areas already handed over by the *Contractor* for correction of any defect shall be subject to the approval of PEMT Operations, and these times shall be communicated to the *Contractor* by the Project Manager.
 - ii. The areas required by the Contractor will need to be temporarily barricaded by the *Contractor* before the *Contractor* commences with any corrective work.
- 3.4.3 The *Contractor* complies with the following constraints and procedures of the *Employer* where the *Project Manager* arranges access for the *Contractor* after Completion:
 - iii. Where the Contractor has to return to Site after Completion to rectify notified Defects, the Employer may either impose the same Site access / egress restrictions as communicated elsewhere under C3.1 Employer's Works Information at the starting date / access date stated under Contract Data - Part One, or as the Works are now in use or the Employer's occupation of the Site may be incrementally or substantially changed post Completion, there may be further access / egress restrictions as required by the Employer.
- 3.4.4 Performance tests after Completion
 - i. Mechanical performance tests shall be carried out as per the guidelines in section 4.5 of this document.

4 Plant and Materials Standards and Workmanship

- 4.1.1 The Contractor provides Plant and Materials for inclusion in the works in accordance with the standard specifications and/or project specifications, unless otherwise stated elsewhere in the Works Information provided by the Employer. All Plant and Materials are new, unless the use of old or refurbished goods and/or Materials are expressly permitted as stated elsewhere in this Works Information or as may be subsequently instructed by the Project Manager.
- 4.1.2 The Contractor replaces any Plant and Materials subject to breakages (whether in the working areas or not) or any Plant and Materials not conforming to standards or specifications stated and notifies the Project Manager and the Supervisor on each occasion where replacement is required.
 - i. No Plant or Materials will be provided 'free issue' by the *Employer*
 - ii. The *Contractor* provides all Plant and Materials necessary for the works
 - iii. The *Contractor* supplies all certification including test certificates, user manuals, maintenance manuals and data books with respect to Plant and Materials procured for the works.

4.2 Investigation, Survey and Site Clearance

- 4.2.1 The *Contractor* validates the information provided by the *Project Manager* and records all existing and final levels on a survey drawing and presents this to the *Project Manager* for acceptance. The Contractor carries out the following investigations at the site:
 - i. Additional geotechnical investigations as deemed necessary by the Contractor, by the Employer or by the Project Manager.
 - ii. Additional topographical surveys where deemed necessary by the Contractor, by the Employer or by the Project Manager.

4.3 Building works and Architectural Scope

- 4.3.1 Where the Association of South African Quantity Surveyors Model Preamble for Trades 1999 are used within the Works Information, the following interpretations and meanings shall apply:
- 4.3.2 In case of any conflict in interpretation, ambiguity or discrepancy between any Model Preamble for Trades 1999 (whether standard or written as a particular project specification) contained in the *Works Information* and the *conditions of contract*, the *conditions of contract* take precedence within the ECC Contract.
- 4.3.3 In case of any conflict in interpretation, ambiguity or discrepancy between any Model Preamble for Trades 1999 (whether standard or written as a particular project specification) contained in this paragraph 4.2 of C3.1 *Employer's Works Information* and specific statements contained elsewhere in C3.1 *Employer's*

Works Information, the specific statements contained elsewhere shall prevail, without prejudice to the *Project Manager's* express duty to resolve any ambiguity or inconsistency in the *Works Information* under ECC Clause 17.1.

4.3.4 Within the Model Preambles for Trades 1999, the following amendments and interpretations shall apply:

Where the word or expression "Principal Agent" is used, read "*Project Manager*" or "*Supervisor*" as the context requires.

Where the word or expression "*Contractor*" is used, read "*Contractor*".

Where the word or expression "Engineer" is used, read "*Project Manager*" or "*Supervisor*" as the context requires.

Where the Model Preambles for Trades 1999 mention "rates" for measured work and any contractual statements relating to payment, all such statements shall be discounted, with the ECC *conditions of contract* taking precedence.

4.3.5 Within the Model Preambles for Trades 1999, A. GENERAL, the following amendments and interpretations shall apply:

Where the word or expression "bills of quantities" is used, this shall be discounted for the purposes of the *Works Information*. The ECC Contract Data - Part One states the main option to apply within the ECC Contract between the Parties.

4.3.6 Within the Model Preambles for Trades 1999, B. ALTERATIONS, B.2 MATERIALS FROM THE ALTERATIONS, CREDIT, ETC and C. EARTHWORKS, C1.4 Materials from demolitions shall not apply. C3.1 *Employer's Works Information* paragraph 3.1.6 states details of the *Contractor's* title (if any) to Materials arising from excavations and/or demolitions and how such Materials are either to be disposed of or re-used in the *works*.

4.3.7 Within the Model Preamble for Trades 1999 Q. PLUMBING AND DRAINAGE, Q.24 TESTS shall be deemed to be included within paragraph 3.2.1 of C3.1 *Employer's Works Information*.

4.3.8 Within the Model Preamble for Trades 1999 U. EXTERNAL WORKS, U.3.8 Process control tests shall be deemed to be included within paragraph 3.2.1 of C3.1 *Employer's Works Information*.

ARCHITECTURAL SCOPE

***Read in Conjunction with Annexure A – Architects Drawings**

- a) The architectural design involves the design of the new Substation Building, associated facilities, and External Works. Architectural layout plans, sections, elevations, construction details and specifications are prepared for the above-mentioned works.
- a) The proposed Substation will provide the Sturrock Dry Dock Electrical Services with a facility to operate from and allow them to effectively maintain stable electrical supply to the Dry Dock Machine Room(s)

- a) The site is owned by TNPA. It is a brown field site with existing buildings, fencing, pavements, and bulk services. It is centrally located in the port and easily accessible. The design of the facility includes the following External work includes but not limited to:

New Substation Building consisting of:

- Two (2) Transformer Rooms of approximately 36m² each
- Two (2) Transformer Rooms of approximately 32m² each
- One (1) MV Switchgear Room of approximately 100m²
- One (1) 400V MCC and Control Room of approximately 60m²
- One (1) Services Room of approximately 50m²
- Access to the Substation:
 - Access to each of the above rooms will be through a 3680 X 2975 roller shutter door (D1) and by means of a concrete ramp for easy movement of equipment.
 - The MV Switchgear Room and the Services Room also get (one each) 920 X 2100 single Aluminium Slatted Machine Room doors (D2).
 - The rooms are interlinked through Solid Hardwood 2-hour fire rated doors (D3). There is no internal link between the Transformer Rooms and the MV Switchgear Room.
- General Construction Notes:
 - Walls inside and out - 280mm face-brick with weepholes outside
 - Wall openings and louvres to Mechanical Engineer's design
 - Floor - power-floated concrete with Sika or similar matt sealer in all rooms.
 - Floor slabs, plinths, foundations and services trenches to Structural Engineers design.
 - Service trenches to be completely waterproof.
 - Steel grid on top of service trenches to be galvanised.
 - Concrete soffit and edge and all exposed concrete to be Class 1 off-shutter quality.
- Concrete Roof:
 - Concrete roof cast to falls - to either side of centre line
 - Overhang to be 450mm on all 4 sides
 - Upstand beam of 200 x 200mm on perimeter
 - 25mm cement screed
 - 30mm foam board insulation
 - Waterproofing to be torched on
 - 500 x 500 x 50mm pre-cast cement pavers laid on waterproofing
- Concrete roof durability specifications (SANS10100-2) to apply:
 - Exposure condition: Very severe (i.e. minimum concrete cover of 50mm)
 - Concrete grade: Minimum 40MPa/19mm
 - Cement / Water ratio: Minimum 2.2 (420kg minimum cement content)
 - Cementitious Extenders: As per SANS10-100-2 for marine environment (GGBS or FA)
 - Reinforcing steel: Hot-dipped galvanized preferred

ANNEXURE A – Architects Drawings

4.4 Structural Engineering Works

4.4.1 The scope of the structural engineering works include:

- i. The construction of all new reinforced concrete and associated concrete works requirements for the electrical infrastructure, listed as follows:
- ii. Reinforced concrete beams and columns
- iii. Brick wall and strip type foundations
- iv. Reinforced concrete bases
- v. Surface bed
- vi. Trenching
- vii. Reinforced roof slab
- viii. Foundations

4.4.2 General Specification

The SANS Standardized Specification for Civil Engineering Construction as approved by the Council of the South African Bureau of Standards shall apply to this Contract. The *Contractor* shall be in possession of these Standardized Specifications and their related documents that apply equally and shall keep a copy of each on site for reference by him and the *Project Manager* for the duration of the Contract.

The following standard specifications are applicable to this contract: -

Specification	Year	Description
SANS 121	2011	Hot-dip galvanized coating on fabricated iron and steel articles – specifications and test methods
SANS 1700		Fasteners (all relevant sections and parts)
SANS 1921		Construction and management requirements for works contracts (all relevant sections and parts)
SANS 2001: BE1	2008	Construction works – Part BE1: Earthworks (general)
SANS 2001: BS1	2008	Construction works – Part BS1: Site clearance
SANS 2001: CC1	2012	Construction works – Part CC1: Concrete works (Structural)
SANS 2001: CC2	2007	Construction works – Part CC2: Concrete works (minor works)
SANS 2001: CM1	2012	Construction works – Part CM1: Masonry walling
SANS 2001: CM2	2011	Construction works – Part CM2: Strip footings, pad footings and slab-on-the-ground foundations for masonry walling
SANS 2001: CS1	2017	Construction works – Part CS1: Structural steelwork
SANS 2001: CT1	2011	Construction works – Part CT1: Structural timberwork (flooring)
SANS 2001: CT2	2011	Construction works – Part CT2: Structural timberwork (roofing)
SANS 2001: DP2	2010	Construction works – Part DP2: Medium pressure pipelines
SANS 2001: DP3	2010	Construction works – Part DP3: Cable ducts
SANS 2001: DP4	2010	Construction works – Part DP4: Sewers
SANS 2001: DP5	2010	Construction works – Part DP5: Stormwater drainage

SANS 2001: DP6	2012	Construction works – Part DP6: Below-ground water installations
SANS 2001: DP7	2021	Construction works – Part DP7: Sewers for buildings
SANS 2001: EM1	2007	Construction works – Part EM1: Cement plaster
SANS 10400		The application of the National Building Regulations (all relevant sections and parts)
SANS 10400		The application of the National Building Regulations (all relevant sections and parts)

4.4.3 The following requirements & specifications apply to the structural engineering works:

CONCRETE, STEELWORK, FORMWORK AND REINFORCEMENT

i. Particular specifications

The following specifications shall apply:

NB: All in situ concrete work (mass and reinforced) shall comply with SANS Specification 1200G ("8 Measurement and Payment" is not applicable) supplemented by the clauses in this section. Where SANS Specification 1200G and the clauses in this section are in conflict the clauses in this section shall take precedence.

In addition, the "Model Preambles for Trades" as recommended and published by the Association of South African Quantity Surveyors, 1999 Edition, shall be read in conjunction with and shall apply to all items in the Bill of Quantities not covered by the 'SANS Standardised Specifications' SANS 1200 Series

Where the term "plain concrete" appears in SANS Specification 1200G it shall be read as "mass concrete".

SANS Specifications	
SANS 1200 G	Concrete
SANS 2001: CC1	SANS 2001: CC1
SANS 1083:2006	Aggregates from natural sources
SANS 10100-2:2000	The Structural use of concrete – Part 2: Materials and execution of work
SANS 50197-1:2000	Cement – composition, specifications and conformity criteria. Part 1: Common cements
SANS 1491-1:2005	Portland cement extenders – Part 1 Ground granulated blast furnace slag
SANS 1491-2:2005	Portland cement extenders – Part 2 Fly ash.
SANS 1491-3:2006	Portland cement extenders – Part 3 Condensed Silica Fume
TRANSNET S420	Specification for Concrete Work
S437 (Transnet)	Concrete Pavement Cement

- Common cements, complying with SANS 50197-1 shall be used for all concrete work. On no account shall masonry cements be used for concrete work, even if the strength designations are the same as for common cements.
- The Supervisor for test purposes may require samples of cement from anyone, or from every consignment. Cement in any consignment from which a sample may have been taken for testing shall not be used until it has been approved. Allowance must be made for possible delay in that tests may take 10 days to carry out.
- Bags of cement shall be stacked in a waterproof, solidly constructed shed with a central door and a floor rendered damp-proof with a tarpaulin. The bags of cement shall be closely stacked (but not against walls) in order to reduce air circulation in such a manner that the cement is used in the order in which it was received, i.e. first in first out.

4.4.4 ALKALI REACTIVE CONCRETE

Alkali Reactive Aggregates shall not be used in this project. The equivalent Na₂O content of the concrete shall not exceed 2, 0 kg/m³ where % Na₂O equivalent = % Na₂O + (0,658 x %K₂O)

4.4.5 AGGREGATES

- Fine and coarse aggregate shall comply with the relevant clauses of SANS 1083.
- Where aggregates have constituents, which in the opinion of the Project Manager, may give rise to damage due to alkali-aggregate reactions, the provisions of 6.3.3.3 shall be applicable.
- Evidence of compliance of the aggregates with the requirements of 6.3.3.1 & 6.3.3.2 shall be furnished as early as practical. No aggregate shall be delivered for use in the works until approval is given.
- Sand (fine aggregate):
- The fine aggregates shall comply with the requirements of SANS Specification 1083. Other aggregates may be approved if they have a satisfactory history and / or test results.
- No aggregate may be used until it has been approved. Samples having a mass of 25kg (16.5 litres) of the proposed aggregate to be used may be required by the Supervisor for test purposes. Samples having a mass of 25kg shall be forwarded every 3 months during concreting work and also if the source of supply is changed. Allowance must be made for possible delay in that the tests may take 14 days to carry out.

4.4.6 ADMIXTURES

Admixtures containing chlorides will not be permitted in reinforced concrete.

4.4.7 COVER BLOCKS

- Cover blocks used to ensure the cover to reinforcement shall be made of cement mortar.
- Cover blocks shall be dense and have a minimum 28 day crushing strength of 30 MPa and shall be cured in water for at least 14 days before being used.
- Cover/spacer blocks made of plastic will not be permitted.

PART C3: SCOPE OF WORK

4.4.8 CONCRETE QUALITY

Prior to the start of any concrete work on site, the Contractor shall submit a quality assurance plan which will ensure compliance with specification and provide acceptable documentary evidence that all specified operations have been carried out satisfactorily.

Where the minimum dimension to be placed during a single pour is larger than 600mm, and the cement content of the reinforced concrete exceeds the following:

Cement Types I and II/ * S : 400 kg/m³

Cement Types II/B-V and II/B-W : 450 kg/m³

The Project Manager may require that measures be instituted to reduce heat development in the concrete.

4.4.9 UNREINFORCED CONCRETE

Class A Concrete:

Filling to cavity of hollow walls.

4.4.10 UNREINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES

- 15 Mpa/19mm Concrete
- Surface blinding under footings and bases.

4.4.11 REINFORCED CONCRETE

40 MPa/19mm Concrete:

Bases.

Foundation beams.

Surface beds cast in panels on waterproofing.

Walls in foundations (Provisional).

Columns in foundations (Provisional).

4.4.12 BATCHING

- All cementitious binders shall be batched by full sack or by mass batching with approved precision weighing equipment.
- All aggregates shall be precisely measured by mass using approved precision weigh-batching equipment, unless otherwise permitted by the Project Manager.
- Should any variation in the composition of the aggregate become apparent, the Project Manager shall be notified and a further sample of aggregate submitted immediately for his approval.

4.4.13 CONCRETE PLACING

The size, shape and depth of any excavation shall be approved by the Project Manager before concrete is placed.

Unless otherwise permitted by the Project Manager, no concrete shall be placed until the fixed reinforcement has been accepted by him and confirmed in writing by way of a release certificate.

4.4.14 CONSTRUCTION JOINTS

Unless otherwise shown on the drawings, the exact position of horizontal construction joints shall be marked on the formwork by means of grout checks in order to obtain truly horizontal joints.

Stub columns, stub walls and stays on footings shall be cast integrally with the footing and not afterwards, even where another class of concrete is being used.

Joint lines shall be so arranged that they coincide with features of the finished work.

Where new concrete is to be cast against a hardened concrete surface, neat cement slurry mixed to a creamy consistency shall be brushed onto the cleaned concrete surface.

Contraction joints shall be smooth and shall have one coat of limewash or PVA applied to the older surface prior to casting the fresher concrete.

4.4.15 SLIP JOINTS BETWEEN CONCRETE AND BRICKWORK

Slip joints shall be provided between brickwork and concrete slabs and beams by levelling up and towelling smooth the bearing surfaces of brickwork with 3:1 cement mortar and covering the bearings before the concrete is baste, with two layers of one side smooth tempered hardboard, with the smooth sides in contact.

The ends and sides of beams and edges of concrete slabs shall be separated from the brickwork with 13mm thick bitumen impregnated soft board or expanded polyethylene strips placed vertically against the brickwork before the concrete is cast.

Similar slip joints shall be provided between brickwork and concrete lintels cast In situ, but without soft board or expanded polyethylene strips at ends.

4.4.16 MOVEMENT JOINTS

All movement joints are to be filled in with approved bitumen impregnated soft board or expanded polyethylene strip unless otherwise specified or detailed on drawings. Descriptions (prices) of movement joints shall be deemed to include formwork.

4.4.17 GROUTING

25 MPa non-shrink cementitious grout:

Bedding approximately 25mm thick under base plate including chamfered edges all round.

4.4.18 CURING COMPOUND

Unless otherwise directed by the Project Manager, the curing compound shall be:

An approved trafficable, resin-based, white pigmented, membrane forming for slopes flatter than 1:1.

An approved clear, aesthetically acceptable, membrane forming for all other concrete surfaces, including beam and slab soffits.

The curing compound shall comply with specification ASTM C309, except that the maximum permissible water loss in the test shall be 0, 40 kg/m².

Alternatively, the curing compound shall be acceptable if the treated concrete retains 90% or more of its mixing water when subject to the test set out in BS 8110 Part 1 – Chapter 6.6.

4.4.19 CURING COMPOUND APPLICATION

The total application rate of the curing compound shall be the greater of the supplier's specification or 0.90 l/m².

On textured concrete surfaces, the total application rate shall be 0.90 l/m².

In cases of concrete surfaces with run-off problems, it may be necessary to apply more than one coat of membrane forming curing compound to obtain the specified total or cumulative application rate.

Curing in accordance with SANS 1200 G shall commence on all concrete surfaces as soon as it is practical in the opinion of the Technical Officer.

On unformed surfaces the curing compound shall be applied after finishing and as soon as the free water on the surface has disappeared and no water sheen is visible, but no so late that the liquid curing compound will be absorbed into the concrete.

On formed surfaces, the exposed concrete shall be wet with water immediately after the forms are removed and kept moist until the curing compound is applied.

Application of the curing compound shall begin once the concrete has reached a uniformly damp appearance with no free water on the surface.

Application of the compound may be done by hand or power spray.

The compound shall be applied at a uniform rate with two applications at right angles to each other to ensure complete coverage.

Pigmented compounds, without a thixotropic agent, shall be adequately stirred to assure even distribution of the pigment during application.

Unless otherwise directed by the Project Manager, the initial 24 hour curing of concrete surfaces not covered by formwork shall be carried out by ponding, covering with constantly wetted sand or mats, or continuous spraying in accordance with SANS 1200 G when the following climatic conditions occur:

- Wind velocity greater than 5 m/s and/or
- Ambient temperature is above 25 °C and/or
- The relative humidity is below 60 %
- If plastic shrinkage occurs, the concrete, while still plastic, shall be re-vibrated, floated and re-coated with curing compound as if no curing has previously taken place.

4.4.20 CURING PERIOD

The curing period for concrete containing only CEM 1 shall be 7 days.

The curing period for concrete containing CEM 1 plus cement extenders (MGBS, FA) shall be 10 days.

The curing period will start on completion of the concrete pour and for formed surfaces shall include the time for which forms are still in place after the pour.

4.4.21 CONCRETE RECORDS

The Contractor shall maintain the following daily records for every part of the concrete structure and shall make these available at all times during the progress of the work for inspection by the Project Manager:

The date and time during which concrete was placed

Identification of the part of the structure in which the concrete was placed

The mixed proportions and specified strength

The type and brand of cement

The slump of the concrete

The identifying marks of test cubes made

Curing procedure applied to concrete placed

The times when shuttering was stripped and props removed

The date of despatch of the cubes to the testing laboratory

The test results. The records shall be delivered to the Project Manager each week except in the case of sub-standard concrete, when the Project Manager shall be informed immediately.

4.4.22 TOLERANCES

Deviations shall be within the limits listed in SANS 1200 G for degree of accuracy II unless otherwise specified.

4.4.23 TESTING AND MONITORING

Frequency of sampling and testing shall be as specified in SANS 1200 G

4.4.24 COST OF TESTS

The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SANS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Project Manager. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Project Manager (Test cubes are measured separately)

If the quantity of concrete from which samples were taken exceeds 40 m³, it shall be subject to the testing of a minimum of 3 sets of samples per day from each grade of concrete placed in each independent structure.

If the quantity of concrete from which samples were taken is less than 40 m³, it shall be subject to the testing of a minimum of 2 sets of samples per day from each grade of concrete placed in each independent structure.

If the Contractor disputes the results of the tests on concrete cubes, the concrete represented by the cubes will be considered acceptable if the Contractor, at his own cost, proves to the satisfaction of the Project Manager that the estimated actual strength of cores taken from the structure, determined in accordance with SANS Standard Method SM 856, is not less than the specified strength.

If the strength of the concrete fails to meet the acceptance criteria stipulated, the Project Manager may in his sole discretion and in addition to the options listed in SANS 1200 G: accept the concrete subject to approved remedial measures being undertaken by the Contractor; or

- o permit the concrete to remain subject to the payment of a penalty. The penalty referred to will be determined as follows:

$$\text{Penalty} = V \times R \times F$$

Where

V = Volume (in the opinion of the Project Manager) of concrete of unsatisfactory strength represented by the test result.

R = Relevant scheduled rate

$$F = 1 - \sqrt{\frac{\text{Average strength of unsatisfactory concrete}}{\text{Specified strength} + 6 \text{ MPa}}}$$

Where the relevant scheduled rate (R) includes or excludes the cost of formwork, or where no formwork was involved.

4.4.25 FORMWORK

Descriptions of formwork shall be deemed to include use and waste only (except where described as left in or permanent), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use.

Formwork to sides of bases, pile caps, ground beams, etc. have been measured provisionally and will only be paid for where it is specifically prescribed by the Technical Officer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in Earthworks

▪ Rough formwork (degree of accuracy ii)

- Rough Formwork to Sides:
- Strip footings.
- Bases.
- Rectangular columns below ground

Smooth formwork (degree of accuracy ii)

- Smooth Formwork to sides:
- Inner and outer face of shaft walls.
- Rectangular and circular columns above ground
- Edges not exceeding 300mm high

Movement joints etc

- Expansion joints with soft board between vertical concrete surfaces:
- 12mm Joints not exceeding 300mm high.

- Saw cut joints:
- 3.2 x 50mm And 6.4 x 20mm saw cut joints in two operations in top of concrete.
- Seal Sikaflex-11FC on backing chord to manufacturer's specification
- Horizontal toggle construction joints through concrete including thick cement slurry to one face.
- Surface beds not exceeding 300mm thick.

Reinforcement (provisional)

- High tensile steel reinforcement to structural concrete work:
- In various diameters and lengths
- Mild steel reinforcement to structural concrete work
- In various diameters and lengths
- High tensile steel reinforcement to structural concrete work
- Fabric reinforcement:
- Fabric reinforcement type as specified on structural drawings.

4.4.26 FORMING KEY TO CONCRETE FOR PLASTER, MOSAIC TILES AND OTHER FINISHES

Where rough formwork has been used, surfaces of concrete to receive plaster, mosaic tiles and other finishes, shall, immediately after the formwork has been removed, be well wetted and wire brushed whilst the concrete is still green and then shushed over with 2:1 cement grout to form a key for the finish, all to the approval of the Supervisor. The shushing is to be allowed to set hard before the finish is applied.

Where smooth formwork is used, surfaces of the concrete to receive plaster, mosaic tiles and other finishes shall be hacked, on the distinct understanding that hacking of concrete shall be at no extra cost to the employer.

- Surfaces of concrete receiving plaster or other finishes shall not be plastered or finished until the Supervisor has signified his opinion in writing that the surfaces are suitable to receive plaster or other finishes.

4.4.27 SLEEVE PIECES AND TIES

Where it is necessary to leave plugs or holes in beams, slabs or any other reinforced concrete, all such plugs or holes must be situated in positions approved by the Supervisor before concreting. Where it is necessary to carry pipes, bolts, wires or any other fittings through reinforced concrete members, approved pipe sleeves must be provided and placed in position before concreting.

Where waste, ventilation water, heating or other pipes under 100mm diameter pass through concrete slabs and beams, galvanised mild steel sleeve pieces or diameters shown or required shall be cast into such concrete slabs and beams.

Chases shall be formed in edges of slabs or slots shall be formed in the slabs, or sizes required, where two or more pipes pass through together.

All necessary bolts, plugs, brackets, cramps, etc. shall be cast into the concrete as the work proceeds.

Where brickwork abuts against concrete, the brickwork is to be tied to the concrete with galvanized hoop-iron ties 1.6m thick by 32mm wide and approximately 600mm long to every third course of brickwork with one end of each tie cast approximately 150mm deep into the concrete. Where such fixing is impossible, i.e. where steel formwork is used, the ties are to be gun-nailed against concrete with steel nails to less than 38mm long.

4.4.28 BAGGED FINISH TO CONCRETE

- Concrete surfaces to receive bagged finish shall be prepared by removing sharp projections and making good defects with 3:1 cement mortar. Finish by rubbing over the whole area with wet rough sacking and cement grout to obtain an even surface.

4.4.29 POWER FLOATED FINISH

Power floated finish to floors etc. means that surfaces shall be floated mechanically to a smooth and even finish before the concrete has set. Small areas inaccessible to the machine are to be floated by hand. Under no circumstances is cement mortar to be added while floating the concrete.

4.4.30 "NO FINES" CONCRETE

"No-fines" concrete, for grading flat concrete roofs and the like to falls, shall be in the proportion of 12 parts 19 iron cubical stone to 1 part cement mixed with 20 litres water per bag of cement and be laid to falls of not less than 15mm per linear metre for mastic asphalt and not less than 20mm per linear metre for sheet roof covering. For heavy load applications special mix designs may be required.

Fillets against upstands:

Form triangular fillets, size 100 x 100mm, in corners with walls, kerbs, etc. neatly mitred at angles, stopped where necessary and finished smooth ready to receive waterproofing.

To raised floor, bases, etc:

"No-fines" concrete for raised floors, bases, etc. shall be in the proportions specified. Finished smooth with 3:1 sand/ cement screed to receive waterproofing.

4.4.31 PRECAST CONCRETE

Materials

Cement, water, aggregates and reinforcement shall be as described under:

CONCRETE, FORMWORK AND REINFORCEMENT.

Concrete shall be as described under: CONCRETE, FORMWORK AND REINFORCEMENT and, unless otherwise specified. Class E concrete shall be used but with coarse aggregate of an appropriate size.

Smooth Finish

Where described as "finished smooth from the mould" such surfaces shall have a layer of fine stuff composed of 1:4 (1 part cement and 4 parts clean fine sand by volume) packed against the faces of the mould before placing the concrete backing. The concrete backing shall be disposed into the moulds in a wet state (not dry pressed) while the facing is still wet.

Projections shall be rubbed off the faces shall be of even colour and free from blemishes, cracks and other imperfections. Salient angles shall be arras rounded.

4.4.32 STEEL WORK

Steelwork materials, manufacture, and erection to be in accordance with the standardized specifications of civil engineering construction SANS 10162 and SANS 1200h

Structural steelwork to be grade 355 JR as per SANS code.

Refer to project specification for painting requirements and surface preparation as well as the relevant SABS code of practice.

For galvanised steelwork, the galvaniser shall provide a certificate of conformance.

4.5 Electrical engineering works

4.5.1 ELECTRICAL WORKS FOR STURROCK DRY DOCK ELECTRICAL INFRASTRUCTURE UPGRADE EXECUTIVE OVERVIEW:

a) This scope of work carried out by the electrical contractor shall cover the work that need to be undertaken at Sturrock Dry Dock Electrical Infrastructure Upgrade at Port of Cape Town. The package of drawings and documents provided to Transnet by the original consultant for the Sturrock dry dock electrical infrastructure upgrade, are of a poor quality and deficient in content. As a result, a gap analysis was conducted to determine whether the deliverables are ready for construction. In response to the engineering gaps identified in the gap analysis report, the Contractor is therefore required to improve the standard of engineering drawings of the Sturrock Dry Dock Electrical Infrastructure Upgrade to the level of detailed construction drawings and documentation and take full accountability of the designs, also supply, delivery, installation and commissioning of all electrical equipment associated with this contract. The scope includes the following items but not limited to.

- The review, design, supply, delivery, installation, and commissioning of MV switchgears. (11.75kV and 3.3kV switchgears).
- The review, design, supply, delivery, installation, and commissioning of transformers. (Dry Type Transformers are preferable).
- The review, design, supply, deliver, installation, and commissioning of Motor Control Center
- The review, design, supply, delivery, installation, and commissioning of new Low Voltage (LV) distribution board (DB)
- The design, supply, delivery, installation, and commissioning of Medium Voltage (MV) cables
- The review, design, supply, delivery, installation, and commissioning of Low Voltage (LV) cables
- The supply delivery and Installation of Medium Voltage (MV) cables, Terminations, and Joints
- The supply delivery and Installation of Low Voltage (LV) cables, Terminations, and Joints

- The review, design, supply, delivery, installation and commissioning Lighting and Small Power including all the associated infrastructure for the Lighting and Small Power.
- The supply, delivery, installation and commissioning Power Factor Correction (PFC) including all the associated infrastructure.
- The design, supply, installation, commissioning of communication equipment, cables, intelligent devices, local SCADA hardware (remote terminals unit, workstation, HMI) for the Sturrock Dry Dock Electrical Infrastructure Upgrade.
- The detailed design, supply, installation, and commissioning of the new protection to integrate the new substation into the existing infrastructure.
- The design, supply, installation, and commissioning of the backup power supply (generator).
- The design, supply and installation of Earthing and Lightning protection for Substation
- The Testing and Commissioning of the entire work and hand it over to the Employer.
- Decommissioning of the existing equipment at Sturrock Dry Dock and Graving Dock underground substations, including all the cabling within the tunnel.

4.5.2 Standard of Work, Equipment and Materials

- a) The electrical designs and installation shall conform to the requirements of the latest edition and amendments of SANS, IEC and TNPA Specification.
- b) Where the local supply authority requirements differ from those specified herein, the TNPA electrical engineer shall be approached for a decision.
- c) All equipment and material used shall be of high quality and the work shall be of a high standard of workmanship carried out by qualified staff under proper supervision by experienced and competent officers.
- d) All equipment and material shall comply with the relevant National or International standard specification. Where equipment does not comply, it shall be submitted to the TNPA electrical engineer for approval prior to installation.

4.5.3 Site Conditions

PART C3: SCOPE OF WORK

The equipment shall be designed and rated for continuous operation under the following conditions:

Condition	Description
Altitude	Sea Level
Air Temperature	45°C Maximum; -5°C Minimum
Equipment Surface Temperature (from sun)	60°C Maximum
Relative Humidity	50% Minimum; 85% Maximum; 60% Average
Lightning conditions	Severe, with a maximum lightning ground flash density of 0.3 lashes per km ² per annum
Air Quality	Coastal salt- laden air with high concentration of iron ore dust
Air Pressure	101.3 kPa

4.5.4 Electrical Conditions

The designs on the Medium Voltage side of the proposed substation are, 11.75kV switchgear were carried out according to SANS 10142-2:2012 Edition 1.8

4.5.5 Utility System Characteristics (i.e.)

- Nominal system voltage: 11.75kV
- Variation system voltage: $\pm 5\%$
- Nominal frequency: 50Hz
- No. of phases: 3

The Low voltage system of supply will be three phase 400 V, 4 wire, and 50 Hz alternating current with the tolerance of $\pm 10\%$.

The voltage may vary within the range of 95% to 105% of the nominal and all equipment installed shall be suitably rated.

4.5.6 Utility System Characteristics (i.e.)

- Nominal system voltage: 400V

- Variation system voltage: $\pm 5\%$
- Nominal frequency: 50Hz
- No. of phases: 3

4.5.7 Particular Specifications

The following publications and specifications (latest edition) shall apply, but it is not necessarily limited to:

SANS/IEC	Description
SANS 10142	Code of Practice for the Wiring of Premise
SANS 1091	National colour standards for paint
SANS 10400	The Application of the National Building Regulations
SANS 60076 –(1-22)	Power Transformer: All parts
SANS 61869-1	Instrument transformers: All Parts
SANS 10142-2	The wiring of premises Part 2: Medium-voltage installations above 1 kV AC not exceeding 22 kV AC and up to and including 3 000 kW installed capacity
SANS 1973-1	Low-voltage switchgear and controlgear ASSEMBLIES Part 1: Type-tested ASSEMBLIES with stated deviations and a rated short-circuit withstand strength above 10 kA

SANS/IEC	Description
SANS 1973-3	Low-voltage switchgear and controlgear ASSEMBLIES Part 3: Safety of ASSEMBLIES with
SANS 10198-1 -14	Power Cable: All Parts
SANS 1339	Electric cables - Cross-linked polyethylene (XLPE) insulated cables for rated voltages 3,8/6,6 kV to 19/33 kV
SANS/ IEC 60529	Degrees of protection provided by enclosures (IP code)
SANS / IEC 62271	Common clauses for high-voltage switchgear and control gear standards
SANS / IEC 60793	Optical fibres
SANS / IEC 60794	Optical fibre cables
SANS / IEC 61000	Electromagnetic compatibility (EMC)
SANS 61073-1	Splices for optical fibres and cables
SANS IEC 61131	Programmable controllers - All parts
NRS 037-1	Telecontrol protocol Part 1: Telecontrol protocol for standalone remote terminal units
IEC 60255	Electrical relays - Part 3 to 25

SANS/IEC	Description
IEC 60870-5-101	Tele-control equipment and systems – Part 5: Transmission protocols – Section 101: Companion standard for basic telecontrol tasks
IEC 60870-5-103	Tele-control equipment and systems – Part 5-103: Transmission protocols – Companion standard for the informative interface of protection equipment
IEC 61274	Fibre optic interconnecting devices and passive components
IEC 61850	Communication protocols and data models for exchange of information within substation and between substations and control centers. for substation automation systems.
IEC 62063	High-Voltage Switchgear and Control gear- The use of electronic and associated technologies in auxiliary equipment of switchgear and control gear
IEC 60870-5	Telecontrol protocols for communication between substations and control centers.

SANS/IEC	Description
IEC 60870-6	Telecontrol application models and protocols used in the operation of power systems.
IEC 61883	Communication network aspects of substation automation systems.

Transnet National Port Authority Specification. The following publications and specifications (latest edition) shall apply, but it is not necessarily limited to:

Specification	Description
TPD-001-EL&P SPEC	Technical specification for the supply and installation of electrical lighting and power in buildings other than dwelling houses
TPD-002-DB SPEC	Technical specification for the design and manufacturing of low voltage distribution boards.
TPD-003-CABLE SPEC	Technical specification for the installation of medium and low voltage cables
TPD-007-MVSWITCHSPEC	Specification for indoor medium/ high voltage (1kv to 33 kv) alternating current switchgear and control gear.
TPD-004-EARTHINGSPEC	Specification for earthing and the protection of buildings and structures against lightning.

TPD-006-TRANSFORMERSPEC	Specification for the supply, delivery, and installation of distribution transformers
TPD-013-Power Factor Correction	Specification for power factor correction equipment

4.5.8 It is the responsibility of the Contractor to ensure that he obtains all standards, specifications, and associated requirements (latest amendments apply). The Employer shall not be held liable for any losses incurred by the Contractor which may arise as a result of non-compliance of the works by the Contractor to the afore - and abovementioned.

4.5.9 General

- a) All calculations, designs, drawings and reports to be produced by the Contractor shall be compiled and submitted in accordance with the procedures of the contract as well as the further requirements as detailed below. All documents, for which prior approvals are required, shall be timeously submitted to the Employer for review and acceptance, prior to placement of orders, fabrication or manufacture.
- b) The Contractor shall appoint specialist subcontractors and/or OEMs to undertake the designs, calculations and drawings as applicable and required, which shall be prepared and checked by suitably qualified and experienced professional engineers, registered with the Engineering Council of South Africa (ECSA) or an equivalent institution recognised by ECSA.
- c) The specialist subcontractors and/or OEMs shall be appointed by the Contractor, subject to approval by the Employer. Designs, calculations and drawings shall not be prepared and checked by the same person and shall be reviewed by the Employer before the commencement of fabrication.
- d) The Employer may, at his sole discretion, request additional design calculations, drawings and associated information, as deemed necessary for verification of the correctness and compliance of the designs. The cost of providing such additional information shall be deemed to be included in the tendered rates, i.e. further payments for such information will not be made.

4.5.10 ELECTRICAL ENGINEERING SCOPE

The Contractor is required to review, improve the standard of engineering drawings and complete detailed designs and take full accountability of the designs associated with this contract, also supply, delivery, installation, commissioning of all electrical works related to Sturrock Dry Electrical Infrastructure Upgrade.

4.5.11 SWITCHGEAR

The Contractor shall verify the switchgear, kA rating, circuit breakers sizing etc, the contractor shall ensure that the switchgear is fully compliance with employer's specifications.

The Contractor shall then design, supply, delivery, installation, and commissioning of Medium Voltage Switchgear.

Drawings for each switchboard to be submitted by the Contractor for review and approval by the Employer prior to commencement of manufacture.

The OEM responsible for the switchboards shall provide certificates, issued by a reputable and recognized laboratory, to demonstrate that the design, construction, ratings and testing procedures for the complete switchboards, as well as all equipment and components installed inside it, are in strict compliance with the latest revision of the applicable IEC standards.

The OEM shall provide conclusive evidence that he possesses extensive experience in the field of MV switchgear and has already supplied equipment of the same type and make, which is in current operation.

The switchboards shall comprise of indoor, gas-insulated, metal-enclosed systems and single busbar systems shall be provided.

The switchboards shall be suitable for local and remote control. The switchboards shall normally be operated remotely

The switchboard shall be designed in accordance with the relevant IEC specifications to ensure:

- Loss of service continuity type: LSC2B.
- Partitioning class: type PM.
- Mounting of all voltage transformers within the arc proof enclosure.
- Easy installation and reduced construction costs.
- Arrangement for future extensions on both sides of the switchboard.
- Internal arc shall be vented out of the switchgear rooms.
- Each switchboard shall be equipped with a base frame for ease of installation.

The switchboards shall be installed with a minimum clearance of 1.5 m away from the substation walls on the sides and the back of the panels. The minimum space required in front of the panels is 3 m, unless specified or instructed otherwise.

All works associated with the design, supply, installation and commissioning of switchgear shall comply with Transnet Specification TPD-007-MVSWITCHSPEC and all the latest applicable SANS, IEC and Regulation.

4.5.12 TRANSFORMER

The Contractor shall design, supply, transport, delivery, off-loading, handling, inspection, installation and commissioning of the indoor power transformers include all the accessories associated with the transformer.

The Contractor shall investigate the option of replacing the oil type transformer with dry type transformer and provide a detailed sound engineering construction design.

The Contractor's designs shall be submitted to Transnet for acceptance prior the manufacturing of the equipment.

It shall be possible to operate all transformers as per loading guide up to overloads of 150% and there shall be no limitations imposed by bushings, tap changer, auxiliary equipment, etc. to meet this requirement

The designs shall comply with employer's specifications and be fit for purpose.

All works associated with the design, supply, installation and commissioning of dry type transformer shall comply with Transnet Specification TPD-017-TRANSFORMERSPEC and all the latest applicable SANS, IEC and Regulation.

4.5.13 MOTOR CONTROL CENTER (MCC)

Design, supply, installation, manufacture, fabrication, assembly, testing, delivery to site, installation and commissioning of the 400V MCC panel.

The contractor shall design the MCC panel in conjunction with the dewatering system project and ensure the proper coordination, also ensure that the MCC design is achieving the purpose intended for.

3.3kV MCC panel will be designed, supply, install by others, however the cables to feed this 3.3kV MCC panel will be designed, supply, install and commissioning by this contract.

All equipment in the control MCC shall be adequately protected against lightning and lightning induced disturbances on the control and power cables. Suitable lightning suppressors, surge arrestors and circuit breakers shall be provided to suit the particular application.

Unless otherwise stated all MCCs shall, as well as complying with the standard specification, shall comply as follows:

- Be designed and manufactured in accordance with SANS 1973 and SANS / IEC 61439-1
- The control equipment shall conform to SANS / IEC 60947 Parts 1 –7
- Be suitable for operation on supply voltages of 3.3kV, 50 Hz, AC. All works associated with the design, supply, installation and commissioning of dry type MCC shall comply with Transnet Specification and all the latest applicable SANS, IEC and Regulation.

4.5.14 LOW VOLTAGE DISTRIBUTION BOARD (LV-DB)

- i. The Contractor shall in conjunction with the gap analysis detailed the low voltage distribution board and submit the detailed designs to the Employer for acceptance prior the manufacturing of the Low Voltage Distribution Board. The designs shall be accepted by Transnet Project Manager prior manufacturing.
- ii. The Contractor shall appoint specialist subcontractors and/or OEMs, to be approved by the Employer, to develop manufacture's drawings.
- iii. The Contractor shall supply, delivery, install and test the low voltage distribution board and all the works associated with.
- iv. The Low Voltage (LV) board shall be designed and manufactured accordance with Employer's specifications and latest SANS and IEC standard.
- v. Switchgear, control gear and instrumentation shall be rated for the system voltage, frequency and number of phases and for the load current and applicable maximum prospective fault current.
- vi. All works associated with the design, supply, installation and commissioning of low voltage distribution board shall comply with Transnet Specification TPD-002-DBSPEC and all the latest applicable SANS, IEC and Regulation.

4.5.15 MEDIUM VOLTAGE CABLES

- i. The Contractor is responsible to verify the MV cable routing as shown in the drawing and investigate further the viability of the option. The Contractor to take into consideration that if the route is not feasible, it is further their responsibility to select the most suitable and practical route and provide Transnet with detailed cable route and cable sizes, formation detail etc.

- ii. The Contractor shall make an allowance to develop the detailed drawing for cable routing and cable sizing.
- iii. The MV cable shall be designed, supply, install and commissioning to power 11.75kV substation, and other 11.75kV equipment (11.75kV Substation Incomer Cables and to feed 3.3kV MCC panel (3.3kV MCC incomers cables) 3.3kV MCC panel design, supply install by others.
- iv. The battery limit of this contract and others is on the 3.3kV MCC panel termination.
- v. Also, the Contractor shall supply, delivery, install and commissioning all MV cables associated with this particular contract.
- vi. All MV cables shall be of the XLPE insulated 6.35/11.75 kV Cu, fire retardant, self-extinguishing, SWA/AWA or armoured type, as applicable, in accordance with SANS 1339 and further applicable contract documentation and drawings. All cables shall bear the SABS/SANS mark of approval. The sizes, ratings and core numbers shall be as specified in the bills of quantities and/or drawings.
- vii. In addition to the above, all MV cables within the substation buildings shall be of the zero toxic emission type. All outdoor MV cables, including cables entering/exiting the substation, shall be of the 3-core armoured type, unless otherwise specified.
- viii. Cables shall be transported and stored in accordance with SANS 10198-6. Stored cables shall have the cable ends thoroughly sealed prior to termination to prevent the ingress of moisture.
- ix. Damaged cables and/or drums delivered to Site will not be accepted. Where the drum and/or cable are damaged, the entire cable reel will be rejected and shall be replaced at the Contractor's expense. The Employer may, at his sole discretion and at the Contractor's expense, request appropriate tests to be performed on the delivered cables to prove that no ingress of moisture or any other form of damage to the cables has occurred.
- x. The Contractor shall furnish all relevant factory certificates for the cables whenever requested to do so by the Employer.
- xi. All un-terminated, exposed cable ends shall be capped by manufacturer-prescribed heat shrink end-caps to prevent moisture ingress. The Contractor

shall furnish all relevant factory certificates for the cables whenever requested to do so by the Employer.

- xii. All final, selected cable routes shall be set out by a qualified, experience and registered professional surveyor. The positions of finally installed cables shall also be surveyed by the surveyor for as-built information/record purposes. The Contractor shall include all survey costs in his tender pricing.
- xiii. Prior to delivery of any cable, the Contractor shall establish that its dielectric is sound, all cores are correct and continuous from end to end and that all cables are free of any visible defects. Any cost arising due to defects on cables, including installed cables, prior to hand over will be for the Contractor's account.
- xiv. All works associated with the design, supply, installation and commissioning of medium voltage cable shall comply with Transnet Specification TPD-003-CABLESPEC and all the latest applicable SANS, IEC and Regulation.

4.5.16 MEDIUM VOLTAGE JOINT & TERMINATION

- i. The Contractor shall supply, delivery, installation and commissioning of the MV Cable Joint and MV Termination.
- ii. Where single core joined with three cores it is advisable for the Contractor to use transition joint, inline for cable of same type and trifurcating joint for different type of cable insulation.
- iii. The Contractor shall, as far as reasonably possible, ensure that the minimum number of joints are used. Only cable manufacturer-prescribed, SABS/SANS approved heat shrink joints shall be used, unless specific approval of a proposed alternative has been granted by the Employer. Should such joints be approved by the Employer, the Contractor shall provide proof in writing that all MV cable joints are approved by the cables OEM(s). All joints shall be fully functional and compatible with the cables to which they will connect.
- iv. The Contractor shall timeously notify the Employer of the dates upon which cable jointing is to be carried out, so that the necessary inspection can be arranged as required. Any cable joints not inspected by the Employer because of insufficient notice being given by the Contractor may be rejected and the

Employer may order the Contractor to redo the cable joint at the Contractor's expense.

- v. Duly authorised representatives of the cables and joints OEM's shall also witness each MV joint undertaken and installed. Allowances for the aforementioned shall be made in the tender rates. Failure to comply with this requirement shall result in the Contractor having to redo the respective joint, or joints as applicable, at his own expense.
- vi. The jointing shall be installed in accordance with SANS 10198-11 and other applicable specifications, taking account also of the cable manufacturer's specifications and requirements for such terminations. The joints shall be capable of withstanding the same test voltages as the rest of the MV cable.
- vii. Joints shall be of the heat shrinkable type for 6.35/11 kV cable, or approved equivalent. The jointing kits shall be suitable for the specific application and shall consist of torque shear connectors. Crimping type connectors will not be accepted. Each kit shall be accompanied by an illustrated set of installation instructions and provided to the Employer for acceptance.
- viii. The joint shall make minimal, if any, use of insulating or stress relieving tapes. The use of electrical stress control and insulating tubing, which is heat-shrunk onto the respective insulating stages on the cores, is preferred above other methods.
- ix. Joints shall have traceable markings, indicating as a minimum the manufacturer's name, specific details of the product and the batch numbers. The full name, ID number and contact details of the individual installing the joints shall also be indicated on the termination. The Contractor shall present to the Employer samples of the wording, including the actual label, for approval.
- x. Core identification shall be by shrink boot marker pencil. Insulation tape markings will not be accepted. All MV joints shall only be undertaken and installed by a person registered and approved as a MV joint installer by the manufacturer of the brand of the MV joints and cables used accordingly.

4.5.17 LOW VOLTAGE CABLES

- i. The Contractor shall review the LV cable size and routing provided in the drawing, also to check the voltage drops and develop a detailed construction drawing.
- ii. The Contractor shall provide the detailed design for the cable racking within the tunnel.
- iii. The Contractor shall supply, delivery, install and test the LV cables associated with this contract.
- iv. The Contractor shall supply, delivery and install cable management system required within the tunnel for supporting LV cables
- v. The Contractor shall supply, delivery and install all cable support system as required including the necessary supports, clamps, hangers, fixing materials, bends, angles, junctions, reducers, T-pieces, etc. The Contractor shall further conduct an assessment for drilling of holes through the structure/tunnel.
- vi. Cable trays and ladders shall comply with SANS 763 with respect to finishes.
- vii. All works associated with the design, supply, installation and commissioning of medium voltage cable shall comply with Transnet Specification TPD-003-CABLESPEC and all the latest applicable SANS, IEC and Regulation.

4.5.18 LOW VOLTAGE JOINTS AND TERMINATION

- i. The Contractor shall supply, delivery, installation and commissioning of the LV Cable Joint and LV Termination.
- ii. Suitable tinned lugs, terminals and other fittings shall be used to match the different sizes and construction of cables.
- iii. Cable lugs shall be installed complete with a colour coded heat shrink covering. Suitably sized washers shall be used for all bolted

4.5.19 ELECTRICAL LIGHTING AND SMALL POWER INCLUDING WIRING

- i. The Contractor shall study the gap analysis provided by the employer in conjunction with the drawings, and simulation report and ensure that the design is fully compliance.
- ii. The Contractor shall develop further the lighting and small power designs as per gap analysis and submit to the Employer for acceptance (the submission shall include lighting simulations and approved for construction drawings).

- iii. Furthermore, the Contractor shall supply, delivery and install the electrical lighting and small power within the substation.
- iv. The Contractor shall supply, delivery and install the electrical lighting within the tunnel and ensure the compliance.
- v. It remains the responsibility of the Electrical Contractor to ensure that the light-fittings delivered by the suppliers comply with the specified types and the quality specification. The luminaires shall be completely wired internally. The conductors shall be protected by grommets where they pass through holes in the body.
- vi. All light-fittings shall be new and unused and shall be complete by including all other accessories required to complete the light-fittings.
- vii. Lamps shall be LED.
- viii. External light fittings shall be installed in vandal proof cages where publically accessible.
- ix. The Contractor shall supply, delivery, install and commissioning all internal wiring for Electrical and Small Power within the substation.
- x. The wiring shall be totally enclosed to prevent possible contact with live components while changing lamps.
- xi. All wiring shall be carried out with PVC insulated, stranded copper conductors and bare stranded copper earth wires, complying with SANS.
- xii. All works associated with the design, supply, installation and commissioning of electrical lighting and small power shall comply with Transnet Specification TPD-001-EL&PSPEC and all the latest applicable SANS, IEC and Regulation.

4.5.20 POWER FACTOR CORRECTION

- i. The Contractor shall design, supply, delivery, install and commissioning of power factor correction to fully comply with the requirements of the substation.
- ii. The Contractor shall design, supply, install and commissioning of battery tripping units
- iii. All works associated with the design, supply, installation and commissioning of electrical lighting and small power shall comply with Transnet Specification

TPD-013-POWER FACTOR CORRECTION and all the latest applicable SANS, IEC and Regulation.

4.5.21 BACKUP POWER SUPPLY

- i. The Contractor shall perform the complete design, supply, installation, testing, and commissioning of a backup power generator system including all the associated infrastructure to mitigate disruptions caused by power outages.
- ii. All works associated with the design, supply, installation and commissioning of electrical lighting and small power shall comply with Transnet Specification TPD-009-STANDBYPLANTSPEC and all the latest applicable SANS, IEC and Regulation.

4.5.22 SUBSTATION AUTOMATION SYSTEM

- i. Scope: The Contractors Works Information shall cover Transnet National Port Authority requirements for the design, supply, installation, commissioning of communication equipment, cables, intelligent devices, local SCADA software and hardware (remote terminals unit, workstation, HMI) for the Sturrock Dry Dock Electrical Infrastructure Upgrade.
- ii. All commissioning and testing required under this project shall be executed in accordance with the requirements of the relevant IEC, transnet and other related specifications and guidelines.
- iii. The Contractor shall design, supply, deliver, offload, and install the substation SCADA system
- iv. The design shall be presented to the Employer's electrical design engineer for acceptance.
- v. The SCADA system shall include the following components but not limited to:
- vi. The operating equipment, instruments, remote terminal unit, intelligent electronic device, server PC, and human machine interface (HMI).
- vii. The contractor shall use drawing no: TNPA/2020-000-E-STM-0001 which shows a typical proposed design of the network's SCADA architecture.
- viii. The proposed SCADA architecture illustrates an integrated system which supports TCP/IP, UDP and other IP based communication protocols as well as

industrial protocols like IEC 61850, IEC 60870-5-104, Modbus TCP, DNP3. These all can work over cellular, private radio or satellite networks

- ix. The contractor shall use a variety of wired and wireless media and protocols involved in getting data back to the monitoring site. This allows implementation of powerful IP based SCADA networks over landline, mixed cellular and satellite systems.
- x. This SCADA communications can utilize a diverse range of wired and wireless media. The contractor shall expand on this proposal or propose a different system that is flexible to incorporate or supersedes this proposal.
- xi. The SCADA system must be designed to monitor (as a minimum expectation) all the electrical plant and equipment with the SCADA communication capabilities. The design proposal shall include a wiring layout to illustrate the connection of the system and the plant.
- xii. The supply to the SCADA network will be through an uninterrupted power supply which will be part of the design supply and installation work by the Contractor's specialist.

4.5.23 PROTECTION STUDY

- i. The Contractor shall appoint specialist subcontractors and/or OEMs to undertake the designs, calculations, and drawings as applicable and required, which shall be prepared and checked by suitably qualified and experienced professional engineers, registered with the Engineering Council of South Africa (ECSA) or an equivalent institution recognised by ECSA.
- ii. The Contractor shall undertake the detailed designs, supply, and installation of new protection for the new substation, including calculation of protection settings (settings study), all electrical interlocking and ensure a complete integration, grading and coordination with other existing electrical infrastructure associated with,
- iii. The Contractor shall ensure that all the protection infrastructure and systems shall be fully functional, operable, compatible, and compliant. The protection shall also ensure full selectivity, stability, speed, and sensitivity.

4.5.24 EARTHING AND LIGHTNING PROTECTION

- i. The Contractor shall appoint a SANS accredited/certified specialist subcontractor/OEM, to be approved by the Employer, to undertake the verification of the earthing and lightning report and develop a complete detailed designs, supply, installation and commissioning of the entire new earthing and lightning protection systems.
- ii. The detailed designs, installations and commissioning shall consider of all the structures in the vicinity of the substation where applicable.
- iii. The Contractor shall ensure that the specialist subcontractor/OEM fully cooperates, coordinates, and furnishes all technical support and associated information to Others, as required, to ensure that the new earthing and lightning protection systems are fully and correctly integrated.
- iv. Allowance has been made for a Class IV earthing and lightning protection system, as per the applicable legislation, regulations, and standards. The earthing and lightning protection systems shall also take account of and cater for all electronic and instrumentation systems.
- v. The selection of earthing and lighting protection materials shall consider the harsh corrosive environment within which the systems will be operated, as well as the risk of galvanic corrosion.
- vi. Typical main earthing and lightning protection equipment will include, but not be limited to:
 - a) Earth mats/grids.
 - b) Earth spikes.
 - c) Insulated copper earth wires for LPS down conductors and general earthing/bonding purposes.
 - d) Earth bars.
- vii. The entire earthing systems for the substation shall be based on a combined MV/LV earth system. The Employer-owned and operated earth installations shall also be in accordance with the TN-S earthing principle. The final earth resistance value shall not be more than 1 Ohm. The Contractor shall also provide the main transformer earth bar at the substation building.
- viii. The Contractor shall bond and earth all metallic services in the vicinity of electrical equipment and circuiting including hot and cold-water pipes, waste and drainpipes, cable trays/ladder, and handrails etc.

- ix. All works associated with the design, supply, installation and commissioning of earthing and lightning protection shall comply with Transnet Specification TPD-004-EARTHINGSPEC and all the latest applicable SANS, IEC and Regulation.

4.5.25 TESTING AND COMMISSIONING

- i. The entire earthing systems for the substation shall be based on a combined MV/LV earth system. The Employer-owned and operated earth installations shall also be in accordance with the TN-S earthing principle. The final earth resistance value shall not be more than 1 Ohm. The Contractor shall also provide the main transformer earth bar at the substation building.
- ii. The Contractor shall make allowance in his tender for the complete testing and commissioning of the installation. All tests shall be carried out in the presence of the Employer's Engineer or his representative and notice of the envisaged testing date shall be given at least ten days beforehand.
- iii. The Contractor shall make allowance in his tender for the supply of all instruments, materials and tests which will be required for the commissioning.
- iv. Should any part of the installation fail during a test or should the equipment in the opinion of the Engineer not meet with the requirements, the Contractor shall replace, repair, or correct such equipment at his expense, to the satisfaction of the Engineer.
- v. The Contractor shall make an allowance for Factory Acceptance Tests (FAT) and Site Acceptance Tests (SAT) for all equipment associated with this specific contract.
- vi. Factory acceptance testing shall follow the following process:
- vii. FATs shall be undertaken prior to shipment of equipment to Site, to demonstrate the functionality of the equipment.
- viii. The Contractor shall ensure that a full copy of the specifications and approved signed copies of the drawings, test procedure and QCP are at hand during all inspections.
- ix. Contractor checks and inspects the manufactured equipment/systems at the specialist subcontractor/ OEMs premises during all stages, including prior to invite client for FATs testing and delivery to Site.
- x. Contractor presents the Employer with written confirmation that the equipment/systems are in full compliance with the project requirements and have

been checked, inspected and fully tested. This confirmation, signed and dated by both the Contractor and the specialist subcontractor/OEM, is to accompany a written request for the Employer to witness the FATs.

- xi. The Contractor shall provide the Employer with at least two weeks' notice prior to such FATs inspections.
- xii. During the Employer's inspections, a fault list shall, if necessary, be drawn up and handed to the Contractor. The Employer shall be given unencumbered access to inspect all equipment and panels prior to and during FATs testing and manufacture.
- xiii. After satisfactory rectification of the fault list, and subsequent to re-inspection and acceptance by the Contractor and Employer, the Contractor shall present to the Employer written confirmation that the equipment is in full compliance with the specification. The equipment may then be dispatched to Site.
- xiv. The Employer shall be provided with copies of all signed-off FAT documentation.
- xv. Site acceptance testing shall follow the following process:
- xvi. Site acceptance tests (SAT) shall be conducted to demonstrate that the equipment is operational after transportation and to certify that any changes agreed to at the FATs have been properly implemented. The following further procedures shall apply:
- xvii. Upon delivery to Site of the equipment/systems, the Contractor shall request the Employer in writing to witness the SATs, as applicable.
- xviii. During the Employer's inspections, a fault list, if necessary, shall be drawn up and handed to the Contractor.
- xix. After subsequent re-inspection and satisfactory rectification of the fault list, and approval by the Employer, the equipment/systems may be installed.
- xx. After the tests, written confirmation by the Contractor shall be provided to the Employer that the equipment/systems are in full compliance. This confirmation shall be signed and dated by both the Contractor and the specialist subcontractor/OEM.
- xxi. The Contractor shall have done everything required to provide the works on or before the completion date and certain individual items before the Sectional Completion Dates, as stated in the Contract Data.
- xxii. The Contractor shall install, and commission all works before the Contractor can hand over the facilities to the Employer.

- xxiii. Reference shall be made to the discipline-specific specifications for sampling and testing requirements.
- xxiv. Should the Contractor have to return to the Site after completion of the works to affect an improvement or repair, the Contractor shall organize access cards for all staff members required to perform the works. The Contractor shall also carry the costs of such access cards.
- xxv. Commissioning of all facilities is required upon the successful completion of the works. Both hot and cold commissioning will be required as per standard practice for electrical, electronic, mechanical and the like works of this nature.
- xxvi. Takeover procedures shall be agreed with the Employer prior to the commissioning phase.
- xxvii. As part of his commissioning documentation, the Contractor shall provide operating and maintenance manuals and provide training workshops for the Employer's operating staff. Such training shall be conducted in accordance with the requirements as detailed in the specifications.
- xxviii. The Contractor may be required to perform operational maintenance within the first year after completion. The level and extent of such operational maintenance will be agreed and negotiated with the Contractor during execution of the works.
- xxix. The Contractor shall complete an electrical compliance certificate on completion of work and to be submitted.
- xxx. The tenderer shall be registered and listed with South African Bureau of Standards and the listing number shall be included in the above-mentioned compliance certificate.

4.5.26 DECOMMISSIONING OF EXISTING EQUIPMENT

After the successful swinging over of the loads to the new substation, the contractor is responsible and required for the decommissioning of existing electrical infrastructure and the transportation of these components to a designated storage area. (Storage area is within the port to be identified by the Transnet).

Pre-Decommissioning Assessment

- i. The Contractor is required to conduct a comprehensive assessment of the existing electrical infrastructure, including identification of all components to be

decommissioned (e.g., cables, transformers, switchgear etc.) in existing underground substations/infrastructure.

- ii. Evaluation of the condition and potential hazards associated with the infrastructure and develop a detailed decommissioning plan, including timelines and resource allocation.

Safety and Compliance

- iii. Ensure all work complies with local, state, and federal regulations regarding electrical work and hazardous materials.
- iv. When handling the work, the contractor shall implement safety protocols, including:
 - a) Personal protective equipment (PPE) for all personnel.
 - b) Safety briefings prior to commencement of work.
 - c) Emergency response plans in case of accidents

Decommissioning Process

- v. Disconnect and isolate electrical systems from power sources safely.
- vi. Remove electrical components systematically, ensuring minimal disruption to surrounding areas.
- vii. Properly label and document each component for inventory tracking.

Transportation to Storage

- viii. Transport components to the designated storage area using appropriate vehicles and equipment.

Post-Decommissioning Activities

- ix. The Contractor shall Conduct a final inspection of the decommissioned site in the presence of the client to ensure all components have been removed.
- x. Finally, the Contractor shall develop and provide Transnet with the report detailing: (components removed and transported, condition for each item, if applicable Any incidents or issues encountered during the decommissioning process)

4.6 Mechanical Engineering Works

4.6.1 Scope of works

- i. The Contractor shall supply, deliver, install, test and commission and handover of the firefighting system and signage that will include, but is not limited to, a manual fire suppression system, gas fire suppression, and fire detection system as depicted on the Employers drawings, piping, valves, fire equipment signage, emergency and safety signage and all emergency evacuation plans.
- ii. The Contractor shall design, supply, install, test and commission and handover all supporting infrastructure required for all mechanical works. Including but not limited to all structural supports for the fire and potable water reticulation systems with regard to, thrust blocks and anchoring down supports for the pipeline or bridges, plant bases or plinths, plant supports and fixings for all equipment. This is to be informed by water hammer analysis and thrust block restraint design.
- iii. The Contractor supply, install, test and commission and handover the Ventilation system.
- iv. The Contractor shall supply, install, test and commission and handover control system and interlocks between HVAC system and Fire detection system.
- v. The Contractor supply, install, test and commission and handover the air conditioning system including the interface with the Fire detection system and hot water system.
- vi. The Contractor shall design, supply, install, test and commission and handover all control and actuation systems; MCC panels and Electrical Distribution Boards required for the mechanical Plant; and Electrical work including connection to power isolators, wiring between switchboards, unit mounted sensors, control devices, etc. and wiring between controllers and remote sensors, remote set point adjusters, etc.;
- vii. The Contractor shall supply, install, test and commission and handover all painting and corrosion protection of Plant;
- viii. The Contractor shall provide all detailed workshop and fabrication drawings, including pipe schedules, HVAC duct routing, services clashes and weld maps for acceptance prior to the commencement of fabrication. This should be followed by all as-built drawings post installation of all items of the Works Information.

- ix. The Contractor shall Design, supply, install, test and Commission of Fire Stops, as per Mechanical Specification (XCTE-0021-ENG-M-SP-0005_Sturrock Dry Dock_Fire Stop Suppression Technical Specification_Rev0A), as a minimum requirement.
- x. The Contractor shall ensure that the gas suppression system installed has undergone a full computer simulated verification by an approved FK-5-1-12 provider and installer. This shall include, but not be limited to, pipe sizing, nozzle sizing, pipe lengths, and all auxiliary equipment needed for the effective performance of the system as per The Employers Design.
- xi. The contractor shall also perform a door fan testing for the gas suppression system, to ensure the integrity of the room.
- xii. The Contractor shall provide a detailed testing and commissioning plan including all FAT, SAT and Commissioning tests and activities prior to the commencement of any testing activities.
- xiii. The Contractor shall test and commission the systems in line with the guidelines as per the Works Information as well as the manufacturer's requirements and industry best practices.
- xiv. The Contractor shall provide Operation and Maintenance manuals that will include, but is not limited to, quality certificates and tests conducted during fabrication and installation, all FAT and SAT tests conducted, all commissioning documentation, detailed as built drawings and technical specifications of all plant and systems, operation methodologies and information, maintenance methodologies and information and details of spares and replacement components.
- xv. The Contractor shall guarantee all installations and equipment for twelve (12) months after "practical completion" date of the completed installation, or sections thereof. This is the date confirmed in writing by the Project Manager.

4.6.2 General

- i. The Contractor shall inform themselves with local site conditions such as safety requirements, access area available on site, type of ground, space available for on-site fabrication, storage, transport, loading and unloading facilities, scaffolding, tackles and tools needed, as no claims by the Contractor, which may arise from ignorance of the site conditions, shall be considered.

4.6.3 Materials and Workmanship

- i. The Contractor shall ensure all materials shall be of the quality specified and the Contractor shall, furnish proof that the materials are of the specified quality. The Engineer is not responsible for Quality Assurance on behalf of the Contractor but shall be entitled to condemn unsatisfactory work.
- ii. The Contractor shall ensure all materials and equipment used for the installations shall be new and undamaged.
- iii. The Contractor shall, if requested by the Project Manager, provide samples of material and Plant for approval. If judged necessary by the Project Manager, such samples may only be returned after the completion of the installation, in order to ensure that the quality of the installed product is the same as that of the approved sample.
- iv. Material for which an SABS specification exists, shall be in accordance with such a specification, and shall bear the SABS mark.
- v. All fire protection Plant used shall originate from suppliers which have been certified in accordance with SABS ISO 9001 (ISO 9001) or SABS ISO 9002 (ISO 9002) for Quality assurance. Copies of certificates of approval shall be provided by the tenderers with their tenders. Plant designed to BS 5446, Fire systems for residential premises, or similar other standards, are not acceptable.

4.6.4 Design Responsibilities & Design and Drawings

- i. The Contractor shall ensure all Plant is positioned and installed in such a way as to ensure proper access for service and maintenance.
- ii. The Contractor shall ensure that all control panels, wiring and components of the electrical installation comply with all application safety codes standards and regulations.
- iii. All electrical works associated with the mechanical plant shall comply with the requirements of electrical works detailed in this document.
- iv. The Contractor shall ensure the designs must be cost effective and energy efficient.
- v. The Contractor shall furnish details of any Plant that is other than, or different to, that specified by the Employer's Engineers, to the Supervisor for Approval by the Employer's Engineers. The Contractor is prohibited from installing said without the required prior authorization from the Employer's Engineers. The approval shall only apply to the selection of the type of Plant and in doing so, the Employer's Engineers

assume no responsibility or accountability for the proper functionality of Plant or associated systems designed by the Contractor in any way whatsoever.

- vi. The Contractor shall ensure all design calculations and simulations shall be submitted to the Project Manager for acceptance by the Employer's Engineer together with the workshop Drawings. The drawings shall be submitted in PDF as well as DWG formats for all submissions. The Contractor shall price in the works for the submission of the calculations and drawings as well as schedule the time for acceptance of all designs and approval of plant type (should there be any deviation from the specifications).

4.6.5 Plant Supports, Bases and Foundations

- i. The Contractor shall design all foundations required for mechanical Plant as per the recommendations of the Plant suppliers and to comply with the requirements of the

4.6.6 Works Information and Technical Specifications.

- i. The Contractor shall design supports, stands, hangers, and suspended platforms for equipment, tanks or other Plant as required.
- ii. The Contractor shall design bases and plinths for all items of plant to comply with the requirements as specified in this document.
- iii. The Contractor shall ensure that all designs of foundations, bases and plinths are compatible with the type of floor designed by the Structural Engineers and be able to tie into the floor to provide a continuous surface.

4.6.7 Workshop Drawings

- i. The Contractor shall ensure preparation of complete workshop drawings is the responsibility of the Contractor. The workshop drawings must be prepared on the basis of:
- ii. The Contractor shall ensure the latest Architect's, Structural Engineer's, Civil Engineer's and Electrical Engineer's drawings regarding co-ordination, layout and design;
- iii. The Contractor shall make use of the actual Plant offered in the Tender and Approved by the Project Manager. No work may be put in hand before the relevant workshop drawings have been reviewed by the Project Manager for acceptance. The Employer's responsibility in this regard is limited to checking conformance with

the works information and co-ordination with other disciplines where necessary
This does not absolve the Contractor of any responsibility in terms of the contract or for errors or omissions in the shop drawings. Comments, amendments, or corrections of shop drawings are not intended to cause any variation in the cost of the work, and

- iv. The Contractor shall include time in the schedule for acceptance of workshop drawings and Approval of Plant by the Employer. All workshop drawings submitted shall be signed by an ECSA registered Professional Engineer.
- v. The workshop drawings shall include but not be limited to the following:
 - P&ID showing the entire system layout and plant details;
 - Detailed drawings of all plant;
 - Plant Specifications, including fixing details and materials;
 - Piping schedules;
 - Detailed piping drawings, including joint details and positions;
 - Welding schedules and weld maps (if applicable);
 - Foundation, Plinth and Base details of all plant;
 - Corrosion protection specifications for all plant and materials;
 - Cable schedules; and
 - General arrangement drawings and component lists for electrical and controls works associated with the mechanical plant.

4.6.8 Builders Work Drawings

i. Openings

- The Contractor shall show all openings and other finishes on layout drawings in such a way as to constitute a clear instruction to others.

Plant Foundations, Bases and Plinths

- The Contractor shall be responsible for providing detailed Builder's Work drawings for all foundations, plinths and plant bases as per the manufacturer's recommendations for the Plant selected.

Noise and Attenuation

- In respect of noise control and attenuation the Contractor shall be responsible for the design, selection, supply and installation of all sound attenuators, spring mounts, mass bases, flexible connections, spring hangers, etc. as required by the Contractor's detailed design to comply with all relevant SANS standards and the OHS Act.

- The Contractor shall ensure that where ducts and pipes pass through concrete, brick or other structural members and finishes. This is achieved without transmission of noise and vibration.

4.6.9 Responsibilities of the Contractor

- i. Ordering of Plant and Materials
- ii. The Contractor shall be responsible to ensure that the project programme is adhered to and that no delays are caused by late deliveries of Plant and materials. All other activities which must proceed placing of orders must be taken into account when the Contractor schedules his activities.
- iii. Storage of Materials and Plant
 - The Contractor shall be responsible for the proper storage of all materials and Plant on site to ensure protection against the elements, damage by impact, dirt, builder's rubble dust theft etc.
- iv. Protection of the Works
 - The Contractor shall programme his work to avoid damage by other Trades and shall be responsible for protection of the works against such damage until handover to the Client.
- v. Accessibility
 - The Contractor shall plan suitable accessibility for thermometers, gauges, controls, dampers and other devices which require reading adjustment, inspection, repair removal or replacement.
 - The Contractor shall design all systems and plant positioning to enable ease of maintenance or repair and provide sufficient space for removal or replacement of plant if required.
- vi. Weather Proofing
 - All outdoor Plant shall be weatherproof and corrosion resistant including minor items such as screws fixers, brackets, etc.
 - The IP rating for waterproofing of all Plant must be accepted by the Project Manager.
 - In addition to the above mentioned, the Contractor may comment on aspects of the Employer's design with a view to improvement or cost saving but must draw to the attention of the Engineer any aspect of the design which in his view is not appropriate. The final decision and responsibility rests with the Engineer.

4.6.10 Alternatives and Main Offer

- i. The main tender price must include for the equipment specified herein, under the heading of Allowed in Tender. This does not necessarily indicate a general preference for the specified equipment but serves the purpose of ensuring that all Tenderers include for the same major equipment in their Tender Price. Generally the specified equipment will be of the quality and in the price range, deemed appropriate for the project. All tenders, including alternatives which comply with the specification, will be considered, but not only on the basis of price. Factors such as Client preference, track record, service facilities, and spares back-up will be taken into account. Where alternatives do not comply

with the specification or specified equipment in full, all deviations must be listed in detail. Incidental extra costs or savings associated with alternative proposals must be shown separately to give the full cost implications of any alternative offered. If tenders are within budget, this in itself will not exclude lower priced alternatives from favourable consideration and vice-versa.

- ii. Any alternatives to the specifications must be highlighted by the Contractor and shall be submitted to the Project Manager for acceptance by the Employer's Engineer. The submission must include the detailed specification for the alternative plant and the Contractor shall specify if the alternative does not meet any of the minimum specified criteria in the technical specifications and drawings.

4.6.11 Service Conditions

The Plant and Material shall be designed and rated for continuous operation under the following conditions:

- i. Ambient/Environment Conditions:

All Plant and Material offered shall be rated for continuous operation under the following conditions:

External Conditions

Summer ambient	: 29.9 °C DB Maximum
Winter ambient	: 11 °C Minimum
Humidity	: Average of 80%
Altitude	: 63m above sea level

Internal Conditions (air-conditioned areas)

Summer	: 22.5 °C Dry bulb – 55 % Relative Humidity
Winter	: 22.5 °C Dry bulb – 55 % Relative Humidity

Noise levels

- Maximum noise levels caused by the operation of items of Plant shall comply with the OHS Act 85 of 1993 and all other regulations.

4.6.12 Normative References

The following publications and specifications (latest edition) shall apply where contextually correct:

- i. In addition to the specifications, the project shall comply with the following relevant Acts and Regulations as listed below:
 - Occupational Health and Safety Act 85 of 1993;
 - The S.A. National Building Regulations and Building Standards Act. (Act 103 of 1977);
 - South African National Standards and Codes of Practice;
 - IEC Standards and Recommendations;
 - International Standards and Codes – ISO, DIN, BS, ASME, ASCE, ANSI, ASTM, EU, NFPA;
 - The local, provincial or S.A. Government laws in force at the time;

- Construction Regulations 2014; and
- National Heritage Resource Act (Act 25 of 1999)

The SI (“Le Systeme International d’ Unites”) – Metric System of Units shall apply. Refer to SANS – M33A: The International Metric System: Guide to the use of the SI in South Africa.

The Contractor shall additionally read the Engineering Works Information for the mechanical works in conjunction to this with the Specifications provided separately in the annexures.

South African National Standards

Standard No.	Description
SANS 10252	Water supply and drainage for buildings Part 1 and Part 2
SANS 10400-T	The application of the National Building Regulations Part T: Fire protection
SANS 10400-O	The application of the National Building Regulations Part O: Lighting and ventilation
SANS 10139	Fire detection and alarm systems for buildings - System design, installation and servicing
SANS 1200HC	Corrosion Protection of Structural Steelwork
SANS 1200 L	Medium Pressure Pipeline
SANS 10400	The Application of the National Building Regulations
SANS 659:2007	Cold water - Copper
SANS 1545	Safety rules for the construction and installation of lifts
SANS 4344	Steel wire ropes for lifts – minimum requirements
SANS 347: 2012	Categorization and conformity assessment criteria for all pressure equipment
SANS 32/SANS121	Hot Dip Zinc (galvanised) Coatings
SANS 10254: 2017	The Installation, maintenance, replacement and repair of fixed electric storage water heating systems
SANS 10139: 2012	Fire detection and alarm systems for buildings
SANS 10064	The preparation of steel surfaces for coating
SANS 763	Hot-dip (galvanised) zinc coatings
SANS 1091	National colour standards for paint
SANS 5493	Code of practice for protective coating of iron and steel structures against corrosion

SANS 10400 XA	Energy usage in buildings
SANS 1910	Portable refillable fire extinguishers
SANS 543	Fire hose reels
SANS 10400W	The application of the National Building Regulations Part W: Fire installation
SANS 1200 LB	Bedding (pipes)
SANS 10142	Code of Practice for the Wiring of Premises.
SANS 10147	Code of Practice for Refrigeration and air-conditioning installations
SANS 1387:2009	galvanized mild steel, medium weight
SANS 62	Pipes suitable for threading and of nominal size not exceeding 150 mm
SANS 1186	Standard signs and general requirements
SANS 1128-1:2010	Components of underground and above-ground hydrant systems
SANS 1461	Major hazard installation - Risk assessments
SANS 1238	Air conditioning ductwork
SANS 10173	Installation, test and balancing of air - conditioning duct work
SANS 14520-5	Gaseous fire-extinguishing systems - Physical properties and system design Part 5: FK-5-1-12 extinguishant

Other Specifications

Specification No.	Description
Government Notice	Pressure Equipment Regulations, 2009
	The General Electrical Specification for the Provincial Administration of the Republic of South Africa Part 2E
	The Municipal Fire Regulations.
	The Municipal by laws and any special requirements of the Supply Activities of the area or district concerned.
	The Occupational Health and Safety Act No 85 of 1993

Testing and Commissioning

- i. The Contractor shall provide a detailed testing and commissioning plan which shall be approved by the Project Manager prior to the start of any testing and commissioning activities. This includes the factory and site acceptance testing.

The Commissioning of each system is done in accordance to the following high level procedure:

- work is inspected by the Contractor to ensure all defects are identified and rectified. The Contractor informs the Employer of all defects identified and the remedial action taken.
- Once the defects identified by the Contractor have been rectified, the Contractor and the Supervisor shall jointly inspect the Works. Any further defects shall be recorded and categorised according to the following:
- Defects that are urgent and require immediate attention to enable testing and commissioning to be completed
- Defects that can be rectified after Commissioning
- Items that are out of scope and require approval to be implemented
- The Contractor and the Supervisor shall jointly inspect once all identified defects have been rectified
- The Project Manager notifies the Contractor that commissioning may proceed.
- A safety review is held with the Contractor, Supervisor, Project Manager, and necessary experts for the system being commissioned.
- Each system and item of major equipment is thoroughly checked using an accepted pre-commissioning check list.
- Functionality is checked for all items under no load conditions.
- Once all checks are complete and functionality confirmed, the system is started under test conditions and then put into operation
- Contractor rectifies all further defects identified during the commissioning process and previously identified defects including approved compensation events.
- The Contractor and the Supervisor shall jointly inspect once all identified defects have been rectified.
- The Contractor shall invite the Employers Engineer for all testing and commissioning activities at least 2 weeks prior to the start of the activities. the employers engineer must be present for all testing and commissioning activities.

Technical Specifications

All Design's undertaken, Plant's and Materials supplied by the Contractor in agreement with the Employer, with the intention to execute the works detailed in this document, shall fully comply with all Mechanical Specifications listed below.

Annexure H	: HVAC Technical Specification
Annexure H	: Fire Suppression Technical Specification
Annexure H	: Gas Fire Suppression Technical Specification
Annexure H	: Fire Stop Technical Specification

5 List Of Drawings

5.1 Drawings issued by the Employer

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Note: Some drawings may contain both Works Information and Site Information.

<u>Drawing Number</u>	<u>Drawing Title</u>	<u>Sheet no.</u>	<u>Revision</u>
TNPA/2020-000-E-ELPS-0001	EARTHING AND LIGHTNING PROTECTION	Sheet 001	00
		Sheet 002	
		Sheet 003	
TNPA/2020-000-E-EL-0001	LOW VOLTAGE EQUIPMENT GENERAL ARRANGEMENT LAYOUT	Sheet 001	00
TNPA/2020-000-E-EL-0002	MEDIUM VOLTAGE EQUIPMENT LAYOUT	Sheet 001	00
		Sheet 002	
		Sheet 003	
		Sheet 004	
TNPA/2020-000-E-EL-0003	TRANSFORMER EQUIPMENT LAYOUT	Sheet 001	00
		Sheet 002	
TNPA/2020-000-E-EL-004	OVERALL SUBSTATION LAYOUT	Sheet 001	00
TNPA/2020-000-E-CR-0001	ELECTRICAL SUBSTATION SITE LOW VOLTAGE CABLE RACKING AND ROUTING LAYOUT	Sheet 001	00
TNPA/2020-000-E-CR-0002	ELECTRICAL SUBSTATION SITE MEDIUM VOLTAGE CABLE RACKING AND ROUTING LAYOUT	Sheet 001	00
TNPA/2020-000-E-CR-003	ELECTRICAL SUBSTATION CABLE RACKING AND ROUTING LAYOUT	Sheet 001	00
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TNPA/2020-000-E-SLD-0001	LOW VOLTAGE SINGLE LINE DIAGRAM	Sheet 001	00
TNPA/2020-000-E-SLD-0002	MEDIUM VOLTAGE SINGLE LINE DIAGRAM	Sheet 001	00
TNPA/2020-000-E-MSCH-0001	3.3KV BUSCOUPLER SCHEMATIC	Sheet 001	00
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TNPA/2020-000-E-MSCH-0003	3.3KV MOTOR FEEDER SCHEMATIC DIAGRAM	Sheet 001	00
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TNPA/2020-000-E-MSCH-0004	3MVA TRANSFORMER FEEDER SCHEMATIC DIAGRAM	Sheet 001	00
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TNPA/2020-000-E-MSCH-0006	11.75KV BUSCOUPLER SCHEMATIC	Sheet 001	00
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TNPA/2020-000-E-LSCH-0001	LOW VOLTAGE DIAGRAM-400V INCOMER AND BUSCOUPLER SCHEMATIC	Sheet 001	00
TNPA/2020-000-E-LSCH-0003	400V FEEDER SCHEMATIC FOR PLINTHBOX CONTRACTOR PORT SIDE	Sheet 001	00

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TNPA/2020-000-E-LSCH-0004	400V FEEDER SCHEMATIC FOR PLINTHBOX CONTRACTOR STARBOARD SIDE	Sheet 001	00
TNPA/2020-000-E-LSCH-0005	400V FEEDER SCHEMATIC FOR PUMPHOUSE FEEDER 1 & 2 TO LV BOARD	Sheet 001	00
TNPA/2020-000-E-LSCH-0006	400V FEEDER SCHEMATIC FOR 20 TON CAPSTAN STARBOARD SIDE 1-2-3	Sheet 001	00
TNPA/2020-000-E-LSCH-0007	400V FEEDER SCHEMATIC FOR 20 Ton CAPSTAN STARBOARD SIDE 4-5 & 7Ton CAPSTAN STARBOARD SIDE 1-2	Sheet 001	00
TNPA/2020-000-E-LSCH-0008	400V Feeder Schematic for Capstan Port Side 6-7 _and Port Side 1-2	Sheet 001	00
TNPA/2020-000-E-LSCH-0009	400V Feeder Schematic for Plinthbox Starboard Side 1-2-3	Sheet 001	00
TNPA/2020-000-E-LSCH-0010	400V Feeder Schematic for Plinthbox Port Side 6- 7	Sheet 001	00
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TNPA/2020-000-E-LSCH-0018	400V Feeder Schematic for Pumphouse LV Board	Sheet 001	00
TNPA/2020-000-E-LSCH-0019	400V Feeder Schematic for New SDD Substation Sub DB	Sheet 001	00
TNPA/2020-000-E-LSCH-0020	400V Feeder Schematic for Cranes Supply Starboard Side 1-2-3 _ 4-5-6	Sheet 001	00

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TNPA/2020-000-E-LSCH-0021	400V Feeder Schematic for Cranes Supply Port Side 7-8-9 _10-11-12	Sheet 001	00
TNPA/2020-000-E-LSCH-0022	400V Feeder Schematic for Pumphouse Feeder 1_2	Sheet 001	00
TNPA/2020-000-E-LSCH-0022	400 Feeder Schematic for 1MVA diesel Generator Feeder 1_2	Sheet 001	00

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XCT.E.0021-1-M-LA-ST0001	Sturrock Dry Dock Upgrade Fire Suppression Layout	.B
XCT.E.0021-1-M-LA-ST0002	Sturrock Dry Dock Upgrade Fire Detection Layout	.B
XCT.E.0021-1-M-LA-ST0003	Sturrock Dry Dock Upgrade Fire Detection Trench Layout	.B
XCT.E.0021-1-M-LA-ST0004	Sturrock Dry Dock Upgrade HVAC Layout	.C

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Exterior Renders	Sheet 004	05

SECTION 2

6 Management and start up

6.1 Management meetings

Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Kick-off meeting	Prior to commencement of construction	Port of Cape Town	<i>Employer, Contractor</i> (key persons) and <i>Project Manager</i> (appropriate delegates)
Contract progress meeting	Fortnightly	Port of Cape Town	<i>Employer, Contractor</i> (key persons) and <i>Project Manager</i> (appropriate delegates)
Risk Register and Compensation Events	Weekly	Port of Cape Town	<i>Project Manager</i> (and appropriate delegates), <i>Supervisor</i> (and appropriate delegates) and <i>Contractor</i> (appropriate key persons)
Monthly SHE meeting	Monthly	Port of Cape Town	<i>Employer, Project Manager</i> (and appropriate delegates), <i>Contractor</i> (line management, site <i>Supervisors</i> , safety officer, environmental officer and safety reps)
Safety workshop	Bi-weekly	On site	<i>Contractor's site, Supervisors</i>
Safety committee meeting	Every second month	Port of Cape Town	<i>Employer, Contractor</i> (key persons) and <i>Project Manager</i> (appropriate delegates)

Meetings may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the works. Records of these meetings are to be submitted to the Project Manager by the person convening the meeting within five days of the meeting.

All meetings are to be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register are not to be used for the purpose of confirming actions or instructions under the contract as these are to be done separately by the person identified in the conditions of contract to carry out such actions or instructions.

6.2 Documentation Control

The *Contractor* provides documentation in accordance with the requirements of the Contractor Documentation Submittal Requirements and the Contractor Documentation Schedule (CDS) and makes specific reference thereto within his Quality Management System and Quality Procedures.

The Contractor Document Submittal Requirements is contained within Annexure B (Contractor Documentation Submittal Requirements) of the Works Information.

A standard Contractor Documentation set will be issued to the *Contractor* upon award and consists of the following:

- Standard Project Drawing Sheet;
- Contractor Document Register (DOC-FAT-0002);
- A4 Review Coversheet for Documents (DOC-FAT-0067);
- Document Deliverable Matrix (DOC-FAT-0075).

The *Contractor* shall assign a dedicated person to provide the services required to execute the documentation control function.

6.3 Safety risk management

6.3.1 The *Contractor* complies with the following H&S specifications and standards:

- i. Annexure C: Health and Safety Project Specification (1124367-02-HS-SP-0001);
- ii. Occupational Health and Safety Act (Act 85 of 1993) and Regulations;
- iii. Transnet Health and Safety policies and procedures;
- iv. National Road Traffic Act.

6.3.2 The *Contractor* ensures that its Subcontractors comply with the requirements H&S specifications and standards.

6.2.3.1 The Employer will acknowledge the achievement of specific safety milestones set for the project with regards to incident statistics, incident recording, safety observation and conversations (SOC's) participation, safety initiatives, etc.

- 6.2.3.2 The Contractor makes the H&S specification available to its employees and Subcontractors in the language of this contract and other local languages as required.
- 6.2.3.3 The Contractor conducts a risk assessment and method statement pack prior to carrying out any activity on the site to the approval of the Project Manager.
- 6.2.3.4 The lines of communication of the various personnel acting on behalf of the Project Manager, who communicates directly with the Contractor, and his key persons with respect to the H&S specification, are contained within Annexure C (Health and Safety Project Specification 1124367-02-HS-SP-0001). One such person is the Clients appointed PrCHSA who will be responsible for obtaining the project construction work permit.
- 6.2.3.5 The roles and responsibilities of the various personnel acting on behalf of the Project Manager with respect to the H&S project specification and health and safety issues as per Annexure C (Health and Safety Specification 1124367-02-HS-SP-0001).
- 6.2.3.6 The Contractor shall appoint a full time CHSO per shift, registered with SACPCMP for the duration of the works, the number of which depending on the scope, complexity, and high risk activities involved, as required by the Construction regulations of 2014, regulation 8(5). The Health and Safety Officer(s) must be on site when work commences at the start of the day and must remain on site until all activities for that day (including the activities of Subcontractors) have been completed.
- 6.2.3.7 The Construction Manager is responsible, within the context of the H&S project specification, for health and safety on the site and reports to the Project Manager. The Construction Manager specific tasks are detailed in Annexure C (Health and Safety project Specification 1124367-02-HS-SP-0001).
- 6.2.3.8 All items of plant, equipment and vehicles travelling within the site shall be equipped with fully operational amber rotating flashing lights. All vehicles shall be roadworthy and shall at all times adhere to all traffic signage and speed limits.
- 6.2.3.9 All employees of the Contractors will undergo entry medicals before the commencement of the project and thereafter on an annual basis inclusive of exit medicals.

6.2.3.10 Trainings as stipulated in the H&S project specification will be conducted by relevant Contractors employees before the commencement of the project.

6.2.3.11 All will comply with PPE requirements as mentioned in this document as well as HS project specification taking note that only long sleeve pants and shirts are allowed to be worn on site.

6.2.3.12 Transportation of employees will not be allowed at the back of bakkies.

6.2.3.13 All permit costs required for any activities relating to the project shall be for the Contractors account.

6.2.3.14 The Contractor shall further comply with all applicable legislative requirements and standards with respect to his own activities and others on the site. A health and safety file to be submitted by the Contractor for approval by the Employer or Employer's representative before site access can be granted. In addition, sufficient time to be allowed for health and safety file to be approved by the Employer's SHEQ Department

6.4 Environmental constraints and management

6.4.1 All work is to be conducted in accordance with the principles of the National Environmental Management Act, 1998 (Act no 107 of 1998) as well as all other applicable legislation, regulations and the accepted environmental good practice.

6.4.2 A project specific Construction Environmental Management Programme (CEMP_r) has been compiled and is included under Annexure D (Environmental Management Programme).

6.4.3 The CEMP_r provides an integrated approach to environmental management. This approach is designed to guide the appropriate allocation of human resources, assign responsibilities, develop procedures and ensure project compliance with regulatory and best practice requirements. The CEMP_r is the minimum acceptable standard for the project that shall be complied with at all times. The CEMP_r requirements shall be applicable to the *Contractor* and all its service providers.

6.4.4 The *Contractor* must sign the declaration of understanding as a commitment to abide with the project CEMP_r and the *Employer's* Environmental Governance Framework. Sufficient environmental budget must be allocated to meet all the project environmental requirements for the duration of the contract.

6.4.5 The *Contractor* shall perform the works and all construction activities within the site and working areas having due regard for the environment and environmental management practices as more particularly described within the CEMP_r.

- 6.4.6 The *Contractor* must appoint a suitably qualified Environmental Officer with a relevant environmental qualification and a minimum of 5 years relevant construction environmental management experience.
- 6.4.7 The roles and responsibilities of the *Contractor's* Environmental Officer are clearly outlined in the CEMPr. The appointed Environmental Officer is required to be on site daily on a full time basis. The Environmental Officer must be a dedicated resource to the environmental discipline and may not be shared with any other discipline on site such as Health and Safety or Quality.
- 6.4.8 The *Contractor* will be required to submit an environmental file to the *Project Manager* post award of tender. Particular requirements of the *Employer* will be made known on award of the contract. A site access certificate shall not be granted until the environmental file has been approved by the *Employer*.
- 6.4.9 Environmental obligation:
- 6.4.10 The overarching obligations of the *Contractor* in terms of the CEMPr before construction activities commence on the site and/or working areas is to provide environmental method statements for all construction operations at the site and/or working area and where requested by the Construction Manager. The *Contractor* shall comply with the following:
- i. The *Contractor* shall identify the kinds of environmental impacts that will occur as a result of their activities and accordingly prepare separate method statements describing how each of these impacts will be prevented or managed so that the standards set out in the CEMPr are achieved.
 - ii. Environmental method statements will be prepared in accordance with the requirements set out in the CEMPr. These method statements shall form part of the environmental file.
 - iii. The *Contractor* shall ensure that his management, foremen and the general workforce, as well as all suppliers and visitors to site have attended the Environmental Induction Programme prior to commencing any work on site.
 - iv. If new personnel commence work on the site during construction, the *Contractor* shall ensure that these personnel undergo the Environmental Induction Programme and are made aware of the environmental specifications on site.
- 6.4.11 The *Contractor* shall take note of the environmental sensitivity of the project area and surrounding areas and shall erect and maintain a highly visible temporary fence/barrier along the boundaries of the site and around any no-go areas that may be pointed out by the Environmental Manager. Site demarcation must be done and be in place prior to commencement of any construction related activity, to the satisfaction of the Construction Manager and Project Environmental Manager.

- 6.4.12 The *Contractor* must take note of various environmental monitoring requirements during construction, as specified by the CEMPr, and must make adequate allowance for undertaking specified monitoring.
- 6.4.13 During the construction period, the *Contractor* shall comply with the following:
- i. Permits and licences, CEMPr and method statements shall be available on site, and the *Contractor* shall ensure that all the personnel on site (including *Subcontractors* and their staff) as well as *Suppliers* are familiar with and understand the specifications contained in these documents;
 - ii. The *Contractor* must sign a Declaration of understanding (T2.2.38) as part of a returnable acknowledging understanding of the environmental requirements for the project. Furthermore, sufficient environmental budget must be allocated for the implementation of environmental management requirements.
 - iii. Method statements that are required during construction must be submitted to the *Project Manager* for approval at least 20 days prior to the proposed commencement of the activity.. The activities requiring method statements cannot commence if the method statements have not been approved by the *Project Manager*. The scope of the required method statements for completion by the *Contractor* shall, as a minimum, include all such items as are listed within the CEMPr;
 - iv. Where applicable, the *Contractor* shall provide job-specific training on an ad hoc basis when workers are engaged in activities, which require method statements.
- 6.4.14 The *Contractor* shall ensure that anyone making deliveries to site is properly informed of all procedures and restrictions, e.g. which access roads to use, no-go areas, speed limits, noise and the like, as required by the relevant project authorisations and the CEMPr, before they arrive at site.
- 6.4.15 The *Contractor* shall be responsible for rehabilitation/reinstatement and cleaning all areas to the satisfaction of the *Employer's* Project Environmental Manager or Environmental Officer as detailed in the CEMPr.

6.5 Quality assurance requirements

- 6.5.1 The *Contractor* shall ensure that all contractual deliverables required to be executed and completed are given due consideration to meet the client's Technical Specifications, Drawings and General Quality Requirements for Contractors and Suppliers (**TNPAQUAL- REQ-14.1**).

6.5.2 The *Contractor's* Quality Management System (QMS) shall conform with the requirements of ISO 9001:2015 to ensure and demonstrate that material, workmanship, procedures, and services conform to the specified requirements.

6.5.3 The *Contractor* submits his Quality documents to the Employer as part of his programme under ECC Clause 31.2 to include details of:

- Quality Manual that is aligned to ISO 9001:2015 QMS requirements.
- Project Quality Plan shall be project specific and be aligned to the TNPAQUAL-REQ-14.1_General Quality Requirements for Contractors and Suppliers.
- CV of Quality Officer supplemented by Qualification - Quality diploma / Technical diploma and ISO 9001:2015 Quality Management System training certificates (Implementation of QMS and Internal Auditing). The Quality Officer MUST have a minimum of 3 years' quality experience in construction projects.
- Quality Control Plans shall be in line with the scope of works detailing the Engineering works (i.e., Civil, structural, electrical, mechanical, Marine etc.) These QCP's shall identify all inspections as detailed in the scope of works together with other tests and verifications required to demonstrate that the works comply with the scope of works, specifications, and drawings.

6.5.4 **Project Quality Plan**

The Project Project Quality Plan (PQP) shall outline the quality strategy, methodology, quality resource allocation, Quality Assurance and Quality Control co-ordination activities to ensure that the scope meet the standards stated in the Scope Information.

The *Contractor's* PQP shall provide a description of how documents provided by the *Employer* to the Contractor are to be managed. The *Contractor* develops and maintains a comprehensive register of documents that will be generated throughout the contract including all quality related documents as part of its Project Quality Plan.

The *Employer* indicates those documents required to be submitted for information, review or acceptance and the *Contractor* indicates such requirements within his register of documents.

The register shall indicate the dates of issue of the documents with the *Employer* responding to documents submitted by the *Contractor* for review or acceptance within the period for reply prior to such documents being used by the Contractor.

6.5.5 **Quality Manual**

A copy of the *Contractor's* Quality Manual will be requested for review by the *Employer* followed, by a Quality Management Systems (QMS) audit at the *Contractor's* Head Office to obtain evidence that a satisfactory quality management system is being maintained.

6.5.6 **Quality Data Book Index**

The *Contractor* shall submit a project specific quality data book index that lists all the project deliverables as per the contract requirements.

6.5.7 **Quality Officer**

The *Contractor* shall nominate a suitably experienced quality representative for all aspects of the Works, including general Site activities, with a staff complement that is adequate to perform the requirements of the PQP. The *Contractor* shall submit the CV and qualifications / certificates of his nominated quality representative for the Project Manager's review and approval.

6.5.8 **Quality Control Plan**

- i. The *Contractor* shall provide a Quality Control Plan (Inspection and Test Plan) specifying his proposed quality control activities for the entire scope of supply and scope of works. The Quality Control Plan shall incorporate, as a minimum, an **INSPECTION CHECK LIST**. The Quality Control Plan shall reference the procedures, codes and standards which apply to the listed activities, the acceptance criteria, the records to be produced and similarly it shall incorporate all Sub-contractors and supplier's activities. The Quality Control Plan shall be prepared on the Contractors / Suppliers standard format.
- ii. Deviations from this Quality Control Plan may only be permitted following acceptance in writing by the Engineer and/or the appointed Third-Party Inspection Authority.
- iii. The Contractor shall not undertake any work in advance of the review and acceptance of the Quality Control Plan without the written consent of Transnet.
- iv. During the review of the Quality Control Plan / Inspection and Test Plan, Inspection and Test intervention points will be included by Transnet and, where applicable, the Third-Party Inspection Authority to indicate their intended monitoring during manufacturing, fabrication, and installation.
- v. The *Contractor* / Supplier shall ensure that any work sub-contracted will be covered by Quality Control Plans / Inspection and Test Plans generated by the relevant Sub-contractor or Supplier.

6.5.9 **Subcontractor**

The Contractor shall also ensure that all Sub-contractors are suitably qualified and experienced to carry out the work for which they have been sub-contracted.

- 6.5.10 The Employer may, at own discretion, require a Quality Audit of sub-contractor(s) to ensure that the sub-Contractor(s) have the necessary management, facilities, skilled staff, and quality control facilities to carry out the Works to ensure compliance with the Works Information.
- 6.5.11 The Contractor shall accept full responsibility for the quality of his sub-contractor(s) work and of materials used, irrespective of any quality surveillance that may be carried out by the Employer or his representative.

6.6 Programming constraints

- 6.6.1 The contract programme, progress reports, subsequent updates, revisions and supplementary programmes as detailed in this section are an essential part of the project control system used by the *Employer* for managing the works and in monitoring progress of the works. Key dates and completion dates, as defined in the Contract Data, are incorporated into the programme.
- 6.6.2 The *Contractor's* detailed programme, which complies with the requirements as indicated in the Works Information, shall be submitted in both hard and soft copy forms. Primavera P6 is being used by the *Employer* for planning on the project. The *Contractor* shall use a suitable computerised planning package (Primavera, MS Projects), as approved by the *Project Manager*.
- 6.6.3 The activity durations are estimated in working days and shall be realistic and based on quantities and applied resources.
- 6.6.4 The calendars used are based on normal working hours per day and working days per week, or as prescribed by the *Project Manager*.
- 6.6.5 The Critical Path Method (CPM) technique of planning and scheduling will be used for the project. The *Contractor* shall provide a programme showing the critical path(s), together with a total float report for acceptance by the *Project Manager*.
- 6.6.6 The programme network shall have no fewer activities than the technical and commercial breakdowns listed in the activity programme.

6.6.7 Networks are constructed to reflect the sequence of activities, using resource scheduling to stagger the performance of activities into the most probable sequence.

6.6.8 The activity durations are estimated in working days and shall be realistic and based on quantities and applied resources.

6.6.9 Structure and methodology of the program. The calendars used are based on normal working hours per day and working days per week, or as prescribed by the *Project Manager* in accordance with the contract.

- The programme layouts shall take into account the approved Facility Breakdown Structure (FBS), reflecting the manner in which the works are to be performed. The following levels of programme are to be used for this project:
- Level 1 Master Programme - defines the major activities and interfaces between engineering, procurement, fabrication and construction, transportation, installation, and pre-commissioning, commissioning, and start-up. This is a high level summary programme, and is included in the monthly progress report.
- Level 2 Project Programme - summary programme "rolled up" from the level 3 project programme. The structure and layout will be in accordance with the FBS as defined in the Level 3 programme.
- Level 3 Project Programme - detailed programme, which is generated for tracking and control of various activities and deliverables for all phases of the project. The activities will be coded in accordance with the FBS. Various layouts and corresponding filters can be developed to reflect the requirements of the project leads and managers.
- Level 4 Project Programme - This detailed, discipline-specific programme is developed and maintained by the Contractor and generated for tracking and control of various activities and deliverables for all phases of the project. This programme utilizes the FBS structure and relates to the programmed activities in the pricing activity programme or groups of activities. The programme represents the day-to-day activities by discipline that are work-unit based and become summarized in the Level 3 activities.

6.6.10 Progress Reporting and Reports

- To demonstrate the actual progress and forecast completion of the works, the *Contractor* shall, on a weekly basis, update and submit to the *Project Manager* the latest accepted programme and progress report, including histograms and S-curves.

- Monitoring and review of the progress of the works shall consist of an assessment of all activities currently in progress to determine percentage complete, forecast completion dates, manning histogram, showing plan versus forecast, deviations from the target programme and actions required for remedy.
- Weekly progress review meetings shall be conducted to report and assist control of the works.

6.6.11 Reports:

- Level 4 programme - updated weekly, showing two separate bars for each task, i.e. the primary bar shall reflect the current forecast dates and the secondary bar the latest accepted programme.
- 3-Week look-ahead programme - in the same format as above, updated and issued weekly.
- Manpower histogram - updated and issued weekly, showing actual, forecast and planned manpower utilization.
- S-curves - updated and issued weekly, showing actual % complete versus planned % for the overall contract and utilizing the earned values as calculated by the detailed progress report.
- Detailed progress report - updated and issued weekly, utilizing a spreadsheet to calculate earned progress of activities, as reflected on the Level 4 programme, based on installed quantities. Activities shall be weighted using man-hours. Report shall indicate progress 'this period' and 'progress to date'.
- Weekly report - a narrative report consisting of an executive summary, area/facility synopsis of the works that are in progress and critical action items (top 10). The report shall be accompanied with a 3-week look-ahead programme and s-curve. A weekly health and safety report is to be submitted.
- Monthly report - a narrative status report submitted a week before the last Friday of each month, or as required by the *Project Manager*. The report shall include, but not be limited to, the following:
 - Summary of progress achieved during the reporting period;
 - Latest updated programme;
 - Project milestones table – planned versus actual and forecast;
 - Status and performance of on-site works;
 - Status and performance of off-site works;
 - Histograms and s-curves;
 - vii. Critical action items list (top 10).
 - viii. Health and safety monthly report

6.7 Contractor's management, supervision and key people

6.7.1 The Contractor provides an organogram of all his key people, as required by the Employer and as stated in the Contract Data, and how such key people communicate with the Project Manager and the Supervisor and their delegates.

6.7.2 The Contractor appoints an EO as a key person under ECC Clause 24.1. The EO ensures that the works, including all parts thereof, are undertaken subject to prior environmental method statement(s), approved by the Project Manager, and ensures that all the project's EA, permits and licences and CEMPR are implemented by the Contractor in a timely and proper manner.

The EO provides the Project Manager with all environmental method statements for approval prior to commencing with the required works. The EO tasks are:

- i. Daily, weekly, and monthly inspections of the Site and working areas. Monitor compliance with
- ii. the project's EA, permits and licences and CEMPR
- iii. Reporting of environmental incidents to the Project Manager;
- iv. Attendance at all SHE meetings, toolbox talks and induction programmes;
- v. Litter control and ensuring the Contractor clears litter from the Site;
- vi. Ensuring that environmental signage and barriers are correctly placed; vii. The EO submits daily, weekly and monthly checklists to the Employer's EO/ECO.

6.7.3 The Contractor nominates a CIRP as a key person under ECC Clause 24.1. The CIRP is based on Site and ensures that all reports and IR requests are submitted accurately and in a timely manner to the Project Manager. The Contractor is referred to Annexure H (Industrial Relations Policy and Management Plan). The CIRP tasks are:

- i. Dedicated to human resources, industrial relations and any other Contractor employee related functions;
- ii. Resolve all human resources and industrial relations matters arising from the Contractor's employees;
- iii. Represent the Contractor at all industrial relations meetings.

6.8 Training workshops and technology transfer

6.8.1 The Contractor facilitates the following requirements for training workshops:

- Pre-mobilization workshop, scheduled for one week prior to site establishment. Workshop will be attended by the site management team including site agents, all Contractor's Supervisors and safety personnel.

- Formal training as stipulated in the Health and Safety Project Specification 1124367-02-HS-SP-0001 to be attended by Contractors identified personnel before commencement of any works.

6.8.2 The *Contractor* provides the following documentation to the *Employer*:

- Health and Safety file, including Health and Safety Management Plan but not limited to:
- Valid company letter of good standing
- Medical certificates of fitness
- Incident management procedures;
- Performance reporting;
- Site training packages;
- Safe work method statements;
- Safety procedures;
- Risk assessment process and as well as risk assessments for all activities;
- Insurance provided by the Employer.

6.9 Insurance provided by the Employer

6.9.1 Insurance provided by the *Employer* is contained in the Contract Data – Part 1.

6.10 Contract change management

6.10.1 No additional requirements apply to ECC Clause 60 series.

6.10.2 Change Management shall be implemented in line with the NEC ECC processes.

6.11 Provision of bonds and guarantees

6.11.1 The form in which a bond or guarantee required by the conditions of contract (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

6.11.2 The *Contractor* provides a bond or guarantee as required by the conditions of contract concurrently with the execution by the Parties of the form of agreement for the ECC contract.

6.12 Records of Defined Cost, payments & assessments of compensation events kept by Contractor

6.12.1 The *Contractor* keeps the following records available for the *Project Manager* to inspect:

- Records of design employees location of work (if appropriate); and

6.12.2 The *Contractor* keeps the following records available for the *Project Manager* to inspect:

- Records of design employees location of work (if appropriate);
- Records of Equipment used and people employed outside the Working Areas (if applicable); and

6.13 The Contractor's Invoices

- 6.13.1 When the *Project Manager* certifies payment (see ECC Clause 51.1) following an assessment date, the *Contractor* complies with the *Employer's* procedure for invoice submission.
- 6.13.2 The invoice must correspond to the *Project Manager's* assessment of the amount due to the *Contractor* as stated in the payment certificate.
- 6.13.3 The invoice states the following:
Invoice addressed to Transnet SOC Ltd;
Transnet SOC Limited's VAT No: 4720103177;
Invoice number;
The *Contractor's* VAT Number; and
The Contract number
The invoice contains the supporting detail
- 6.13.4 The invoice is presented either by post or by hand delivery.
- 6.13.5 Invoices submitted by post are addressed to:

**Transnet National Ports Authority House
P O Box 4245, Cape Town, 8001
Port of Cape Town 8001
South Africa**

- 6.13.6 Invoices submitted by hand are presented to:
- Transnet National Ports Authority, a division of Transnet SOC limited
Port of Cape Town
TNPA House
South Arm Road
Cape Town
South Africa
8001**

6.14 CONTRACTOR LIABILITY

- 6.14.1 The *Contractor* warrants that it will be liable to Transnet for any loss or damage caused by strikes, riots, lockouts or any labour disputes by and/or confined to the *Contractor's* employees, which loss will include any indirect or consequential damages;
- 6.14.2 The *Contractor* warrants that no negotiations or feedback meetings by the *Contractor's* employees shall take place on Transnet premises, whether owned or rented by Transnet.

- 6.14.3 The Contractor shall give notice to Transnet of any industrial action by the Contractor's employees immediately upon becoming aware of any actual or contemplated action that is or may be carried out on Transnet's premises, whether owned or rented, and shall notify Transnet of all matters associated with such action that may potentially affect Transnet.
- 6.14.4 The Contractor is responsible for educating its employees on relevant provisions of the Labour Relations Act which deal with industrial action processes, and the risks of non-compliance.
- 6.14.5 The Contractor is required to develop a Contingency Strike Handling Plan, which plan the Contractor is obliged to update on a three monthly basis. The Contractor must provide Transnet with this plan and all updates to the Plan. The Contractor is responsible to communicate with its employees on site details of the plan.

6.15 INDUSTRIAL ACTION BY CONTRACTOR EMPLOYEES

- 6.15.1 The Contractor complies with the requirements of the IRCC involving the engineering construction Contractors engaged (including all future Contractors) by the Employer [include details as appropriate ex:
- 6.15.2 In the event of any industrial action by the Contractor's employees, the Contractor is required to provide competent contingency resources permitted in law to carry out any of the duties that are or could potentially be interrupted by industrial action in delivering the Service.
- 6.15.3 The Contractor warrants that it will compensate Transnet for any costs Transnet incurs in providing additional security to deal with any industrial action by the Contractor's employees.
- 6.15.4 In the event of any industrial action by the Contractor's employees, the Contractor is obliged:
- 6.15.5 To prepare and deliver to Transnet, within two (2) hours of the commencement of industrial action an Industrial Action Report. If the industrial action persists the Contractor is required to deliver the report at 8h30 each day.
- 6.15.6 The Industrial Action Report must provide at least the following information:
- Industrial incident report,
 - Attendance register,
 - Productivity / progress to schedule reports,
 - .Operational contingency plan,
 - Site security report,
 - Industrial action intelligence gathered.
- 6.15.7 The final Industrial Action Report is to be delivered 24 hours after finalisation of the industrial action.
- 6.15.8 The management of the Contractor is required to hold a daily industrial action teleconference with personnel identified by Transnet to discuss the industrial action, settlement of the industrial action, security issues and the impact on delivery under the contract.
- 6.15.9 The resolution of any disputes or industrial action by the Contractor's employees is the sole responsibility of the Contractor.
- 6.15.10 Access to Transnet premises by the Contractor and its employees is only provided for purposes of the Contractor delivering its services to Transnet. Should the Contractor and its employees not, for any

reason, be capable of delivering its services Transnet is entitled to restrict or deny access onto its premises and unless otherwise authorized; such person will be deemed to be trespassing.

- 6.15.11 The Contractor complies with the requirements of the IRCC involving the engineering construction Contractors engaged (including all future Contractors) by the Employer [include details as appropriate ex:
- 6.15.12 The roles and responsibilities of the various personnel acting on behalf of the Project Manager with respect to IR issues are stated in the paragraphs following:
- 6.15.13 The PIRM is responsible for ensuring that the Contractor complies with the PIRPMP. The PIRM acts on behalf of the Project Manager.
- 6.15.14 The PIRM specific tasks are:
- To complete the PLA prior to the Contract Date; and
 - To assign specific duties to the PSIRM.

The SIRM is responsible, *inter alia*, for day-to-day IR on the Site and Working Areas through the implementation of the PIRPMP. The SIRM reports directly to the PSIRM and the *Project Manager*.

The SIRM specific tasks are:

- 6.15.15 To liaise with the Contractor prior to the commencement of construction activities (as per the Contractor's programme accepted by the Project Manager) with respect to IR issues under the SIP [insert contract specific details –include as an Annexure as necessary]

6.16 Plant and Materials

- 6.16.1 The *Contractor* provides Plant and Materials for inclusion in the *works* in accordance with SANS 1200A sub-paragraph 2.1, unless otherwise stated elsewhere in the *Works* Information provided by the *Employer*. All Plant and Materials are new, unless the use of old or refurbished goods and/or Materials are expressly permitted as stated elsewhere in this *Works* Information or as may be subsequently instructed by the *Project Manager*.
- 6.16.2 Where Plant and Materials for inclusion in the *works* originate from outside the Republic of South Africa, all such Plant and Materials are new and of merchantable quality, to a recognised national standard, with all proprietary products installed to manufacturers' instructions.
- 6.16.3 The *Contractor* replaces any Plant and Materials subject to breakages (whether in the Working Areas or not) or any Plant and Materials not conforming to standards or specifications stated and notifies the *Project Manager* and the *Supervisor* on each occasion where replacement is required.
- 6.16.4 Plant & Materials provided "no free issue" by the *Employer*
- 6.16.5 The *Contractor* provides all other Plant and Materials necessary for the *works* not specifically stated to be provided "free issue" by the *Employer*.
- 6.16.6 *Contractor's* procurement of Plant and Materials are at his own expense.

6.17 Tests and inspections before delivery

- 6.17.1 The *Contractor* submits to the Supervisor details to certify that tests and inspections have been carried out on Plant and Materials by others which include:
- AIA
 - INC

6.18 Marking Plant and Materials outside the Working Areas

- 6.18.1 The *Contractor* prepares and marks items of Plant and Materials outside the Working Areas with clearly defined markings.

6.19 Contractor's Equipment (including temporary works).

- 6.19.1 The *Contractor* provides the *Project Manager* with relevant detail of the category of Equipment (or similar) for the execution of the *works*

SECTION 3

C3.2 CONTRACTOR'S WORKS INFORMATION

The *Contractor* shall provide the following:

- Contractor proposed designs.
- Plant and Material specifications and schedule.
- All design criteria as mentioned in section 2.2 to 2.6 and
- Any other designs and specification that the *Contractor* deem necessary for the completion of works.

All designs carried out by the *Contractor* to be approved by the *Project Manager* or *Project Manager's* representative



PART C4

SITE INFORMATION

C4: Site Information

1. INFORMATION ABOUT THE SITE

1.1 Site Location

The Sturrock dry dock, situated towards the South Eastern end of the Port, is one of the two graving type dry docks in the Port of Cape Town shown below;



Figure 1. SDD Location on the Port of Cape Town

The Docks is a graving type dock. It consists of a narrow basin that can be flooded to allow ships or other marine vessels to be floated in for repairs and maintenance.

The climate is Mediterranean with rain falling predominantly in the winter months and high winds blowing in the summer. Typical climate conditions during the year based on historical data are provided in the table below.

	<u>Summer</u>	<u>Winter</u>
<u>Average Temperature</u>	<u>27 °C Max</u>	<u>18 °C Max</u>
	<u>17 °C Min</u>	<u>7 °C Min</u>
<u>Average Rainfall</u>	<u>3mm</u>	<u>47.4mm</u>
<u>Humidity</u>	<u>68%</u>	<u>80%</u>
<u>Wind</u>	<u>23km/h</u>	<u>13km/h</u>

Table 1

Depicted below in figure 2, is the location of the existing underground Graving Dock 11.75 / 0.400 kV and Pump House 11.75 / 2.2 / 0.400 kV substations. The reticulation network is connected via a tunnel and ducting system all around the dock.



Figure 2. SDD Overview

1.2 Working Hours

Normal working hours at the Port of Cape Town are from 08:00 to 16:30, Monday to Friday, Inclusive.

1.3 Access Permit Controls

There is a card access system to enter the Port Area. The Contractor will be required to obtain access permits to the Port Area (from the TNPA Customer Service Centre, NPA House, Port of Cape Town) for all staff employed on this work between 08:00 and 16:00 from Monday to Friday. The Port Staff will arrange the required access permits and issue them to the contractor free of charge. Should any person lose his/her access permit these will be replaced at a cost of R 360-00 per person, to be paid by the Contractor. This will also apply if permits are not returned at the end of the project completion.

All staff will also be required to attend a Port Induction session (approx. 3 hours) before commencement of any work. Costs for the hours of the staff of the Contractor will be covered by the Contractor. Any work to be performed on site in the Dock area must be agreed upon between the Ship Repair Team Manager and prior approval granted. This should be communicated via a schedule. Works may only be executed from Mondays to Fridays from 08:00 and 16:00. Additional working time may be negotiated

1.4 Work Area and Supply of Services

The Employer will provide a laydown area within the dock perimeter. There will be water and power tap off points in the vicinity.

1.5 Health and Safety

Transnet National Ports Authority has a strict health and safety policy in place. No persons may enter the site and undertake work on the site until undergoing the mandatory induction. The induction will be arranged by the Port staff at no cost to the Contractor.

2. DESCRIPTION OF EXISTING FACILITIES

The Sturrock dry dock is one (1) of three (3) dry docks in the Port of Cape Town; and is used by the ship repair industry for recoating of vessel hulls, launching newly constructed vessels and deconstruction of scrapped vessels.

The dock is made up of key bulk electrical infrastructure in various key point areas significant to achieving this objective; as depicted in the figure below:

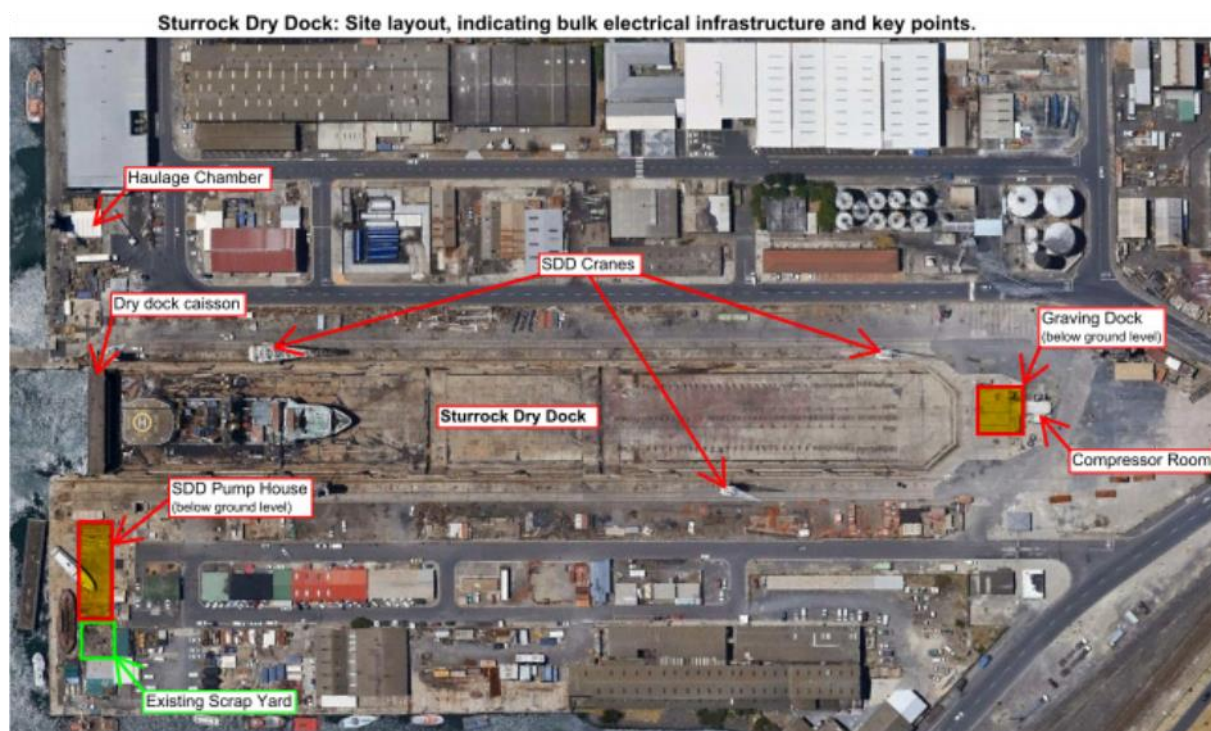


Figure 3. Key areas of the bulk electrical infrastructure

The proposed new above ground substation site is between Alkmaar and Berrio Rd in figures below (figure 4 and 5), which is currently not fenced and it consists of a unused abulution facility. The abulution facility needs to be demolished and the bulk services blanked off or alternatively diverted.

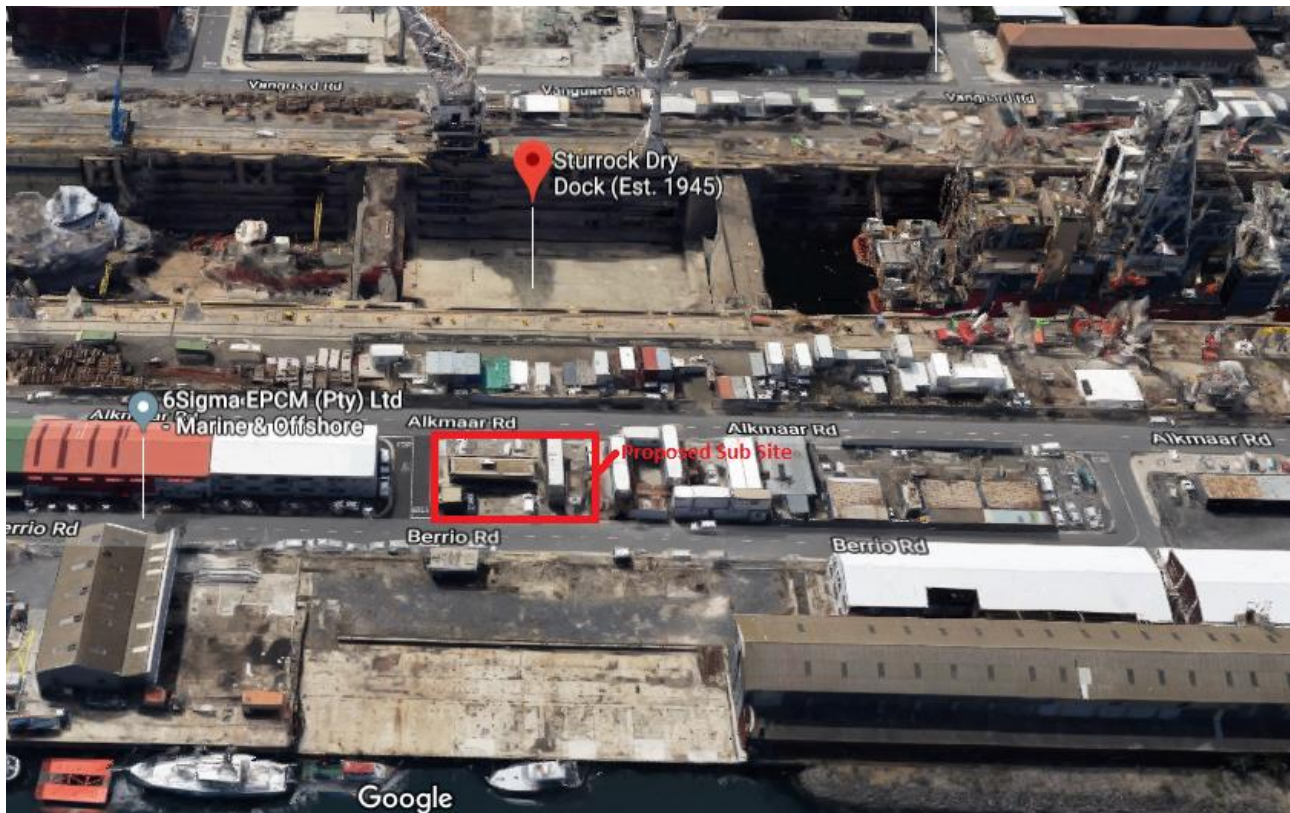


Figure 4 Proposed Substation Site



Figure 5 Abulution facility to be demolished

Below in figure 6, is a drawing showing the cable route which is proposed for the project, from where the proposed location of the new substation into the dry dock area, and connecting into the existing underground

tunnels. The existing cables inside the underground tunnels are to be removed with all associated cable supports and other associated items with the existing cables.

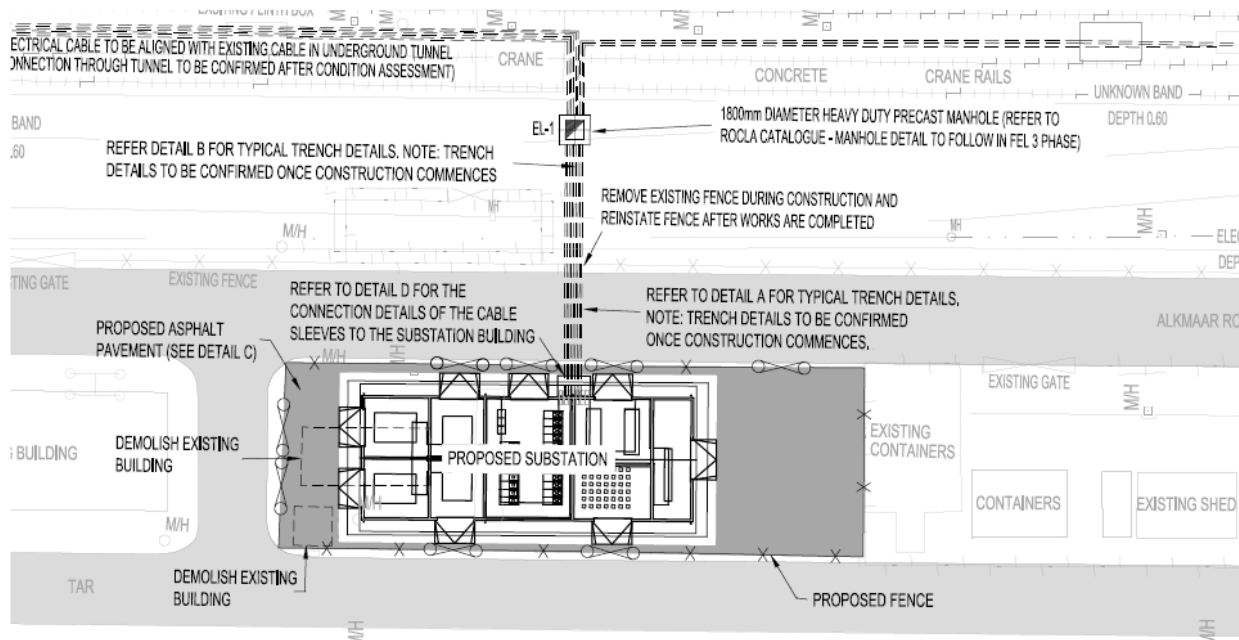


Figure 6 Cable route from substation into the underground tunnels

All preliminary wayleave procedures and relevant stakeholder engagements have been initiated with the relevant parties and servitudinal/wayleave agreements approvals currently pending contractor appointment and supporting documentation (Detailed Traffic Management Plan, Detailed Prefab Housing Design) approvals.

There is currently an existing perimeter fencing around Sturrock Dry Dock and there is one key entry point into the Sturrock Dry Dock, which is along the Duncan Dock Road.



Figure 7 Entry Points

3. CONTRACTOR'S SITE ESTABLISHMENT AND LAYDOWN

The dock will be divided into areas to facilitate space allocation during project execution space allocation as follows:

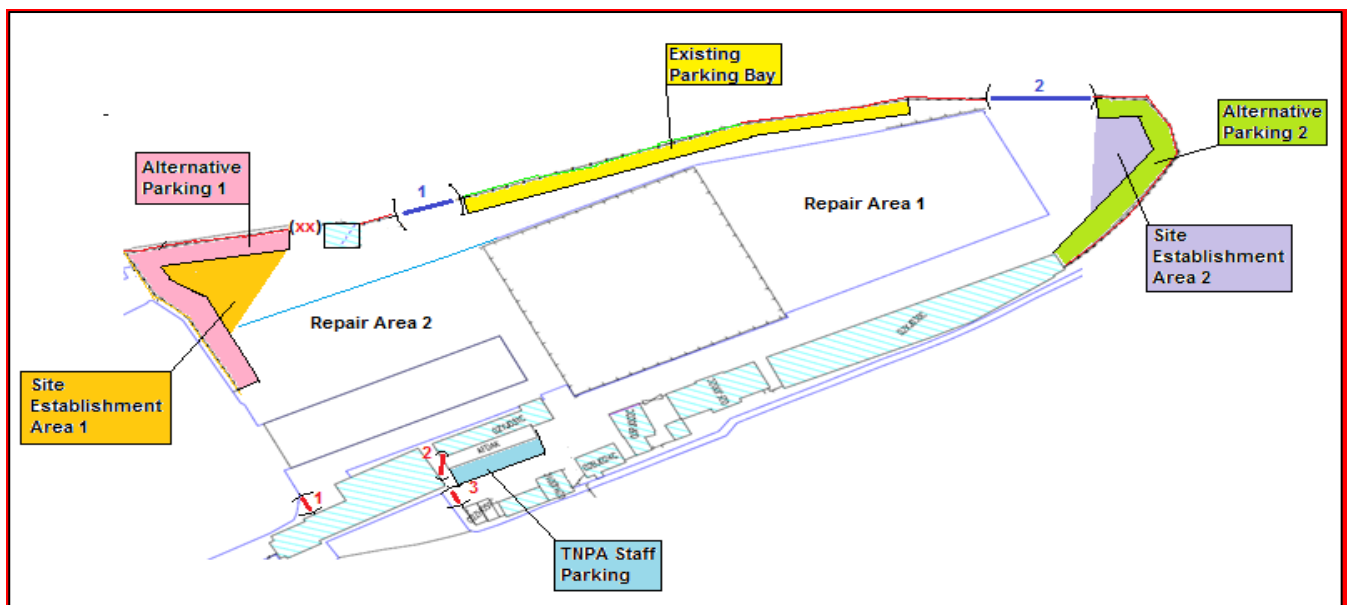


Figure 8. Dock Area Divisions

The cabling to take place inside the dock areas tunnels. Therefore the appointed contractor will have to sectionalize his work area according to the divisions above. This is so that there will always be parking space for dock users and the contractor himself.



Figure 9 Abulution facility site

4. BASIC SITE RISKS

The Employer has conducted Basic Risk Assessment to identify risks associated with the construction works. The contractor shall make himself familiar with the document and ensure all risk mitigation measures recommended are implemented during the project and that additional identified risk are incorporated as part of the deliverables.



SBD 6.1

PREFERENCE POINTS CLAIM FORM

SBD 6.1

PREFERENCE POINTS CLAIM FORM

This preference form must form part of all bids invited. It contains general information and serves as a claim for preference points for Broad-Based Black Economic Empowerment [**B-BBEE**] Status Level of Contribution.

Transnet will award preference points to companies who provide valid proof of their B-BBEE status using either the latest version of the generic Codes of Good Practice or Sector Specific Codes (if applicable).

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable. Despite the stipulated preference point system, Transnet shall use the lowest acceptable bid to determine the applicable preference point system in a situation where all received acceptable bids are received outside the stated preference point system.

1.3 Preference points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contribution.

1.4 The maximum points for this bid are allocated as follows:

	POINTS	POINTS
PRICE	80	90
B-BBEE STATUS LEVEL OF CONTRIBUTION	20	10
Total points for Price and B-BBEE must not exceed	100	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE status level of contributor together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated

or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **"all applicable taxes"** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (c) **"B-BBEE status level of contributor"** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (d) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the supply/provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- (e) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (f) **"EME"** means an Exempted Micro Enterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (g) **"functionality"** means the ability of a bidder to provide goods or services in accordance with specification as set out in the bid documents
- (h) **"Price"** includes all applicable taxes less all unconditional discounts.
- (i) **"Proof of B-BBEE Status Level of Contributor"**
 - i) the B-BBBEE status level certificate issued by an authorised body or person;
 - ii) a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice; or
 - iii) any other requirement prescribed in terms of the B-BBEE Act.
- (j) **"QSE"** means a Qualifying Small EEnterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (k) **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties.

3. POINTS AWARDED FOR PRICE

3.1 THE 90/10 PREFERENCE POINT SYSTEMS

A maximum of **90** points is allocated for price on the following basis:

90/10

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for comparative price of bid under consideration

P_t = Comparative price of bid under consideration

$P_{\min}$ = Comparative price of lowest acceptable bid

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 4.1 preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

- 4.2 The table below indicates the required proof of B-BBEE status depending on the category of enterprises:

Enterprise	B-BBEE Certificate & Sworn Affidavit
Large	Certificate issued by SANAS accredited verification agency
QSE	Certificate issued by SANAS accredited verification agency Sworn Affidavit signed by the authorised QSE representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership (only black-owned QSEs - 51% to 100% Black owned) [Sworn affidavits must substantially comply with the format that can be obtained on the DTI's website at www.dti.gov.za/economic_empowerment/bee_codes.jsp .]
EME¹	Sworn Affidavit signed by the authorised EME representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership

¹ In terms of the Implementation Guide: Preferential Procurement Regulations, 2017, Version 2, paragraph 11.11 provides that in the Transport Sector, EMEs can provide a letter from accounting officer or get verified and be issued with a B-BBEE certificate by

	Certificate issued by CIPC (formerly CIPRO) confirming annual turnover and black ownership Certificate issued by SANAS accredited verification agency only if the EME is being measured on the QSE scorecard
--	--

- 4.3 A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level verification certificate for every separate bid.
- 4.4 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 4.5 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 4.6 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.
- 4.7 Bidders are to note that the rules pertaining to B-BBEE verification and other B-BBEE requirements may be changed from time to time by regulatory bodies such as National Treasury or the DTI. It is the Bidder's responsibility to ensure that his/her bid complies fully with all B-BBEE requirements at the time of the submission of the bid.

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 6.1

- 6.1 B-BBEE Status Level of Contribution: . = (maximum of 10 points)
- (Points claimed in respect of paragraph 6.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?
(*Tick applicable box*)

SANAS accredited professional or agency as the Transport Sector Code has not been aligned to the generic Codes. EMEs in the Transport Sector are not allowed to provide a sworn affidavit as the generic codes are not applicable to them.

YES		NO	
-----	--	----	--

7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE.

(Tick applicable box)

YES		NO	
-----	--	----	--

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional Supplier/Service provider
- ☐ Other Suppliers/Service providers, e.g. transporter, etc.

[*TICK APPLICABLE BOX*]

8.7 Total number of years the company/firm has been in business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contribution indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If a bidder submitted false information regarding its B-BBEE status level of contributor,, which will affect or has affected the evaluation of a bid, or where a bidder has failed to declare any subcontracting arrangements or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) if the successful bidder subcontracted a portion of the bid to another person without disclosing it, Transnet reserves the right to penalise the bidder up to 10 percent of the value of the contract;
 - (e) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (f) forward the matter for criminal prosecution.

WITNESSES

1.

2.

.....

SIGNATURE(S) OF BIDDERS(S)

DATE:



SBD 4

BIDDERS DISCLOSURE

SBD4

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest² in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of institution	State

² the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

--	--	--

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....

.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....

.....

3 DECLARATION

I, _____ the _____ undersigned,
(name)..... in submitting
the accompanying bid, do hereby make the following statements that I certify to
be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

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

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

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

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....	
Signature	Date
.....	
Position	Name of bidder