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:

SUPPLY AND INSTALLATION OF FALL PROTECTION SYSTEM FOR ROAD LOADING AND RAIL LOADING FACILITIES AT THE TRANSNET PIPELINES TARLTON DEPOT

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	.....	.....
Date	.....	.....

C1.2 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X2 Changes in the law
		X16: Retention
		X18: Limitation of liability
		Z: *Additional conditions of contract*
	of the NEC3 Engineering and Construction Contract June 2005 (amended June 2006 and April 2013)	
10.1	The *Employer* is:	**Transnet SOC Ltd (Registration No. 1990/000900/30)**
	Address	Registered address: **138 Eloff Street** **Braamfontein** **JOHANNESBURG** **2000**
	Having elected its Contractual Address for the purposes of this contract as:	**Transnet Pipelines** **202 Anton Lembede Street** **Durban, South Africa** **4001**
10.1	The *Project Manager* is: (Name)	**Katleho Nthoba**
	Address	**202 Anton Lembede Street, Durban, 4000**

	Tel	**031 361 1713**
	e-mail	**Katleho.Nthoba@transnet.net**
10.1	The *Supervisor* is: (Name) Address Tel No. e-mail	**TBA**
11.2(13)	The *works* are	**Supply and Installation of Fall Protection System or Road Loading and Rail Loading Facilities at the Transnet Pipelines Tarlton Depot**
11.2(14)	The following matters will be included in the Risk Register	**None**
11.2(15)	The *boundaries of the site* 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 *law of the contract* is the law of	**the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**2 weeks**
2	**The *Contractor*'s main responsibilities**	**No additional data is required for this section of the *conditions of contract*.**
3	**Time**	
11.2(3)	The *completion date* for the whole of the *works* is	**18 August 2023**
30.1	The *access dates* are	**Part of the Site** — **Date** **1 The whole of the site** — **On Start date**
31.1	The *Contractor* is to submit a first programme for acceptance within	**2 weeks of the Contract Date.**
31.2	The *starting date* is	**19 June 2023**

32.2	The *Contractor* submits revised programmes at intervals no longer than	**2 weeks.**
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.	
4	**Testing and Defects**	
42.2	The *defects date* is	**52 (fifty two) weeks after Completion of the whole of the *works*.**
43.2	The *defect correction period* is	**2 weeks**
5	**Payment**	
50.1	The *assessment interval* is monthly on the	**18th (eighteenth) day of each successive month.**
51.1	The *currency of this contract* is the	**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 *interest rate* 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)** **the number of days with rainfall more than 10 mm** **the number of days with minimum air temperature less than 0 degrees Celsius** **the number of days with snow lying at 08:00 hours South African Time**
	The place where weather is to be recorded (on the Site) is:	**The *Contractor*'s Site establishment area**

	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	**The closest weather station to the Contractor's Site establishment area**
	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 *conditions of contract*.**
8	**Risks and insurance**	
84.1	The *Employer* provides these insurances from the Insurance Table	
	1 Insurance against:	**Loss of or damage to the *works*, 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 *works*, Plant and Materials & Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor)* 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* must comply at a minimum with the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 as amended.**
		The *Contractor* provides these additional Insurances	**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 **The insurance coverage referred to in 1, 2, 3 and 4 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**
9	**Termination**	**There is no additional Contract Data required for this section of the *conditions of contract*.**
10	**Data for main Option clause**	
A	**Priced contract with Activity Schedule**	**No additional data is required for this Option.**
11	**Data for Option W1**	
W1.1	The *Adjudicator* is	**Both parties will agree as and when a dispute arises. If the parties cannot reach an agreement on the *Adjudicator*, the Chairman of the Association of Arbitrators will appoint an *Adjudicator.***
W1.2(3)	The *Adjudicator nominating body* is: If no *Adjudicator nominating body* is entered, it is:	**The Chairman of the Association of Arbitrators (Southern Africa)** **the Association of Arbitrators (Southern Africa)**
W1.4(2)	The *tribunal* is:	**Arbitration**
W1.4(5)	The *arbitration procedure* is	**The Rules for the Conduct of Arbitrations of the Association of Arbitrators (Southern Africa)**

	The place where arbitration is to be held is	**Durban, 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**	
X2	**Changes in the law**	**No additional data is required for this Option**
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 *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**Nil**
X18.2	For any one event, the *Contractor's* liability to the *Employer* for loss of or damage to the *Employer's* property is limited to:	**The deductible of the relevant insurance policy**
X18.3	The *Contractor's* 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 *Contractor's* total liability to the *Employer* 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 *end of liability date* is	**2 years after Completion of the whole of the *works***

Z	***Additional conditions of contract* are*:***	
Z1	**Obligations in respect of Job Creation**	
Z1.1		**It will be a material term of this contract that the *Contractor* must contribute to the *Employer's* job-creation objectives as set out in Returnable Schedule T2.2-23.**
Z1.2		**The *Contractor's* undertaking as to the number of new jobs created due to the award of this contract as set out in Returnable Schedule T.2.2-23 will constitute a binding agreement throughout the duration of the contract until Completion, if not, it will be deemed that the *Contractor* has failed in full to meet this specific material term of the contract, which may constitute a reason for termination..**
Z1.3		**The *Contractor* shall provide to the *Employer*, on a monthly basis or upon receiving an instruction to do so by the *Project Manager*, any documentation and/or evidence required by the *Employer*, which in the *Employer*'s opinion would be necessary to verify whether the *Contractor* has maintained the job-creation undertaking as stipulated in Returnable Schedule T.2.23 The *Contractor* shall provide the said documentation and/or evidence within the period stated or as instructed. The provision of the documentation and/or evidence shall not constitute a compensation event.**

Z2 Additional clauses relating to Joint Venture

Z2.1 **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.**
Z2.2		**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.***
Z3	**Additional obligations in respect of Termination**	
Z3.1		**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)**

Z3.2	**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"**
Z3.3		**Amend "R1 – R15 or R18" to "R1 – R15, R18, R22 or R23."**
Z4	**Right Reserved by the *Employer* to Conduct Vetting through SSA**	
Z4.1		**The *Employer* reserves the right to conduct vetting through State Security Agency (SSA) for security clearances of any *Contractor* 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.**

Z5	**Additional Clause Relating to Collusion in the Construction Industry**	
Z5.1		**The contract award is made without prejudice to any rights the *Employer* may have to take appropriate action later with regard to any declared tender rigging including blacklisting.**
Z6	**Protection of Personal Information Act**	
Z6.1		**The *Employer* and the *Contractor* are required to process information obtained for the duration of the Agreement in a manner that is aligned to the Protection of Personal Information Act.**

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 *Contractor* is (Name):	
	Address	
	Tel No.	
	Fax No.	
11.2(8)	The *direct fee percentage* is	**%**
	The *subcontracted fee percentage* is	**%**
11.2(18)	The *working areas* are the Site and	
24.1	The *Contractor's* key persons are:	
	1 Name:	
	Job:	**Project Manager**
	Responsibilities:	
	Qualifications:	
	Experience:	
	2 Name:	
	Job	**Construction Manager**
	Responsibilities:	
	Qualifications:	
	Experience:	

	2 Name:			
	Job	**Safety Manager/Officer**		
	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			
A	**Priced contract with activity schedule**			
11.2(20)	The *activity schedule* is in			
11.2(30)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**		
A	**Priced contract with activity schedule**	**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:			

PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option A	2
C2.2	Activity Schedule	6

C2.1 Pricing Instructions: Option A

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, (with amendments June 2006 and April 2013) (ECC) Option A states:

Identified and defined terms	11 11.2	(20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract. (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. (27) The Price for Work Done to Date is the total of the Prices for • each group of completed activities and • each completed activity which is not in a group A completed activity is one which is without Defects which would either delay or be covered by immediately following work. (30) The Prices are the lump sums for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

1.2. Measurement and Payment

1.2.1 The Activity Schedule provides the basis of all valuations of the Price for Work Done to Date, payments in multiple currencies, price adjustments for inflation and general progress monitoring.

1.2.2 The amount due at each assessment date is based on **completed activities and/or milestones** as indicated on the Activity Schedule.

1.2.3 The Activity Schedule work breakdown structure provided by the *Contractor* is based on the Activity Schedule provided by the *Employer*. The activities listed by the *Employer* are the minimum activities acceptable and identify the specific activities which are required to achieve Completion. The activity schedule work breakdown structure is compiled to the satisfaction of the *Project Manager* with any additions and/or amendments deemed necessary.

1.2.4 The *Contractor's* detailed Activity Schedule summates back to the Activity Schedule provided by the *Employer* and is in sufficient detail to monitor completion of activities related to the Accepted Programme in order that payment of completed activities may be assessed.

1.2.5 The short descriptions in the Activity Schedule are for identification purposes only. All work described in the Works Information is deemed included in the activities.

1.2.6 The Activity Schedule is integrated with the Prices, Accepted Programme and where required the forecast rate of payment schedule.

1.2.7 Activities in multiple currencies are separately identified on both the Activity Schedule and the Accepted Programme for each currency.

1.2.8 The tendered total of the prices as stated in the Contract Data is obtained from the Activity Schedule summary. The tendered total of the prices includes for all direct and indirect costs, overheads, profits, risks, liabilities and obligations relative to the Contract.

C2.2 Activity Schedule

The Tenderer details his Activity Schedule below or makes reference to his Activity Schedule and attaches it to this schedule.

The details given below serve as guidelines only and the Tenderer may split or combine the activities to suit his particular methods.

Schedule below to be read in conjunction with the 2 off drawings provided by Transnet Drawing office with the current layout as well as the proposed outcome drawing.

INSTALLATION OF FALL PROTECTION SYSTEM ACTIVITY SCHEDULE

ITEM	CIVIL WORKS INFORMATION	UNIT	QTY	RATE	AMOUNT
1.0	**Preliminaries & General Items (Safety File, Equipment,etc)**				
1.1	Detailed breakdown required	sum	1.0		**R** -
2.0	**Works Items**				
2.1	**Road Loading Facility (Supply, Fabricate,Install and Commission)**				
2.1.1	Supply Galvanized Steel Beams (IPE 160 I-Section)	t	0.7		R -
2.1.2	Supply galvanized Beam Hangers (IPE 140 I-Section)	t	0.2		R -
2.1.3	Supply galvanized End plates that will be welded on the Beam Hangers	sum	1.0		R -
2.1.4	Supply Self-Retracting Lifelines	no.	6.0		R -
2.1.5	Supply galvanized fastening components	sum	1.0		R -
2.1.6	Supply beam trolleys that will withstand the maximum required load of 140kg and compatible to IPE 160 I-Beam Section	no.	6.0		R -
2.1.7	Supply four energy shock-absorbing lanyards each with an arresting force of 6 kN (or approximately 600kg).	no.	6.0		R -
2.1.8	Supply maximum loading signage (140kg)	no.	4.0		R -
2.1.9	Install maximum loading signage on each Beam	sum	1.0		R -
2.1.10	Develop and supply fabrication drawings for approval	sum	1.0		R -
2.1.11	Fabricate Steel material off-site	sum	1.0		R -
2.1.12	Transport fabricated material to site (Tarlton Depot)	sum	1.0		R -
2.1.13	Install four FAS in the Road Loading Facility	sum	1.0		R -
2.1.14	Test, Commission the FAS and produce (load test certificate)	sum	1.0		R -
				Sub Total	**R** -
2.2	**Rail Loading Facility (Supply, Fabricate, Install and Commission)**				
2.2.1	Supply Galvanized Steel Beams (IPE 180 I-Section)	t	1.7		R -
2.2.2	Supply Galvanized Steel Brace (IPE 120 I-Section)	t	0.2		R -
2.2.3	Supply connection plates for bracing	sum	1.0		R -
2.2.4	Supply connection plates for splicing	sum	1.0		R -
2.2.5	Supply Self-Retracting Lifelines	no.	4.0		R -
2.2.6	Supply galvanized fastening components	sum	1.0		R -
2.2.7	Supply beam trolleys that will withstand the maximum required load of 140kg and compatible to IPE 180 I-Beam Section	no.	4.0		R -
2.2.8	Supply maximum loading signage (140kg)	no.	6.0		R -
2.2.9	Install maximum loading signage on each Beam	sum	1.0		R -
2.2.10	Develop and supply fabrication drawings for approval	sum	1.0		R -
2.2.11	Fabricate Steel material off-site	sum	1.0		R -
2.2.12	Transport fabricated material to site (Tarlton Depot)	sum	1.0		R -
2.2.13	Install four FAS in the Road Loading Facility	sum	1.0		R -
2.2.14	Test, Commission the FAS and produce (load test certificate)	sum	1.0		R -
				Sub Total	**R** -
				Grand Total to be carried to the Form of Offer	**R** -

Document Title:

SCOPE OF WORK

Project Title:

INSTALLATION OF FALL PROTECTION SYSTEM FOR ROAD LOADING AND RAIL LOADING FACILITIES AT THE TRANSNET PIPELINES TARLTON DEPOT

REVISION 01: FOR TENDER

CHANGE CONTROL

DOCUMENT PREPARATION

	Name	Title	Signature	Date
Compiled By	Katleho Nthoba	Civil Specialist		27/02/2023
Reviewed by	Sibongiseni Cebekhulu	Engineering Technician		27/02/2023
Reviewed by	Makhado Mulaudzi	Intermodal Specialist		27/02/2023
Approved by	Thershni Pillay	Acting Chief Engineer		27/2/2023

1. GLOSSARY

TLR	- Tarlton
OHS	- Occupational Health and Safety
SANS	- South African National Standard
SHEQ	- Safety, Health, Environmental & Quality
TPL	– Transnet Pipelines

2. CONTENTS

3. INTRODUCTION

This scope of work document outlines Transnet Pipeline's requirements for the installation of a Fall Protection System for both Road Loading and Rail Loading Facilities at Tarlton Depot.

4. TRANSNET PIPELINES BACKGROUND

Transnet Pipelines (TPL), a division of Transnet SOC Ltd, provides strategic pipeline infrastructure, with associated world class pipeline logistics, for the petroleum and gas industries of South Africa. This is done in partnership with our customers and stakeholders thereby assuring the African sustainable development imperative. Established in 1965, TPL owns, maintains and operates a network of some 3114 km of high-pressure petroleum and gas pipelines. TPL transports an average of 15 billion litres of fuel per annum amid Covid-19. This includes diesel, unleaded petrol, aviation turbine fuel and crude oil.

The pipeline network and the liquid fuels network depots traverses five provinces, KwaZulu-Natal, Free State, Gauteng, North West and Mpumalanga. The intake stations are the two refineries in Durban of which one is no longer in operation including imports, the crude refinery at Coalbrook (Natref) and the Synfuel plants at Secunda (Sasol II and III). TPL transports petrochemical products through the pipeline network comprising of underground steel pipelines, delivery depots and pump stations. The pipeline is laid within a servitude, which traverses through many properties (private, state owned, local authorities) with the pump stations and delivery depots located in rural, industrial and suburban areas along the pipeline routes.

The pipelines range from 6" (150mm) to 24" (600mm) in diameter. All the pipelines have been constructed in accordance with the American Code ASME B31.4 and ASME B31.8 code for gas. Pressure in the pipeline network is monitored 24 hours a day, 365 days a year in the control centre in TPLs' National Operating Centre (NOC).

5. PROJECT BACKGROUND

Currently the Road and Rail loading facilities at Tarlton Depot are without fall protection system. A fall protection system is a requirement when working at heights. According to safety guidelines, facilities contemplated in sub regulation (2) of Occupation Health and Safety Act 1993: Section 8, shall include as may be necessary –belts, harnesses, nets, fall arresters, lifelines, safety hooks, or any similar equipment of a type that will effectively protect persons against falling. It is therefore necessary to provide Fall Protection System for the aforementioned facilities.

6. GENERAL DESCRIPTION OF THE SERVICES

6.1 Employer's Objective

Contractor is required to manufacture, provide supporting material, install, and test, a Fall Arrest System (FAS), for Road and Rail Loading Facilities, which is to consist of:

6.1.1 Road Tanker Loading

Rigid Rail Fall Protection System: A fall arrest system with components and accessories for use when employees are working on top of a road tanker in a designated bay. System shall consist of rigid lifeline / monorail beam (no more than 10 metres long) over the road tanker bay, plus accessory items that adhere to the safety, design, and all other standards set forth in this Scope of Work. The Road Loading Facility consists of four bays therefore each bay must have a monorail beam installed.

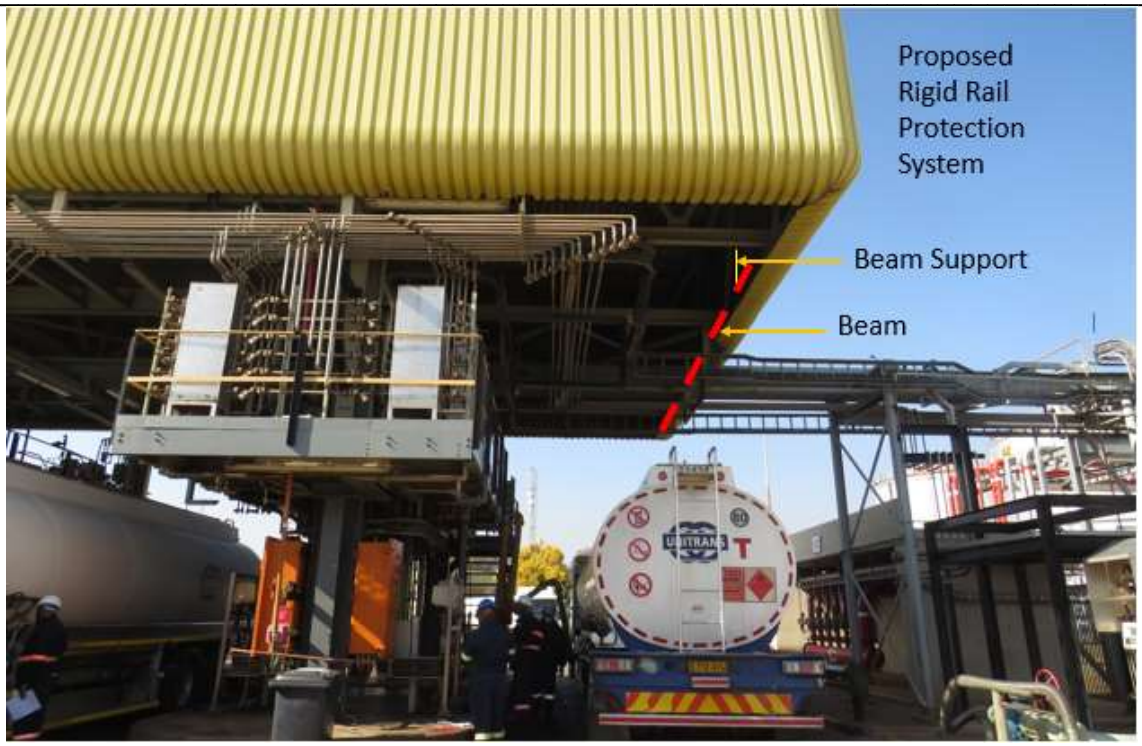

Figure 1: Current Road Tanker Loading Facility at Tarlton Depot indicating the proposed Rigid Rail Fall Protection System Solution for Road Loading Facility

6.1.2 Rail Tanker Loading

Rigid Rail Fall Protection System: A fall arrest system with components and accessories for use when employees are working on top of a rail tanker in a designated bay. System shall consist of rigid lifeline / monorail beam (no more than 45 metres long per each bay) over the rail tanker load bay, plus accessory items that adhere to the safety, design, and all other standards set forth in this Scope of Work. The Rail Loading Facility consists of two bays therefore each bay must have a monorail beam installed.

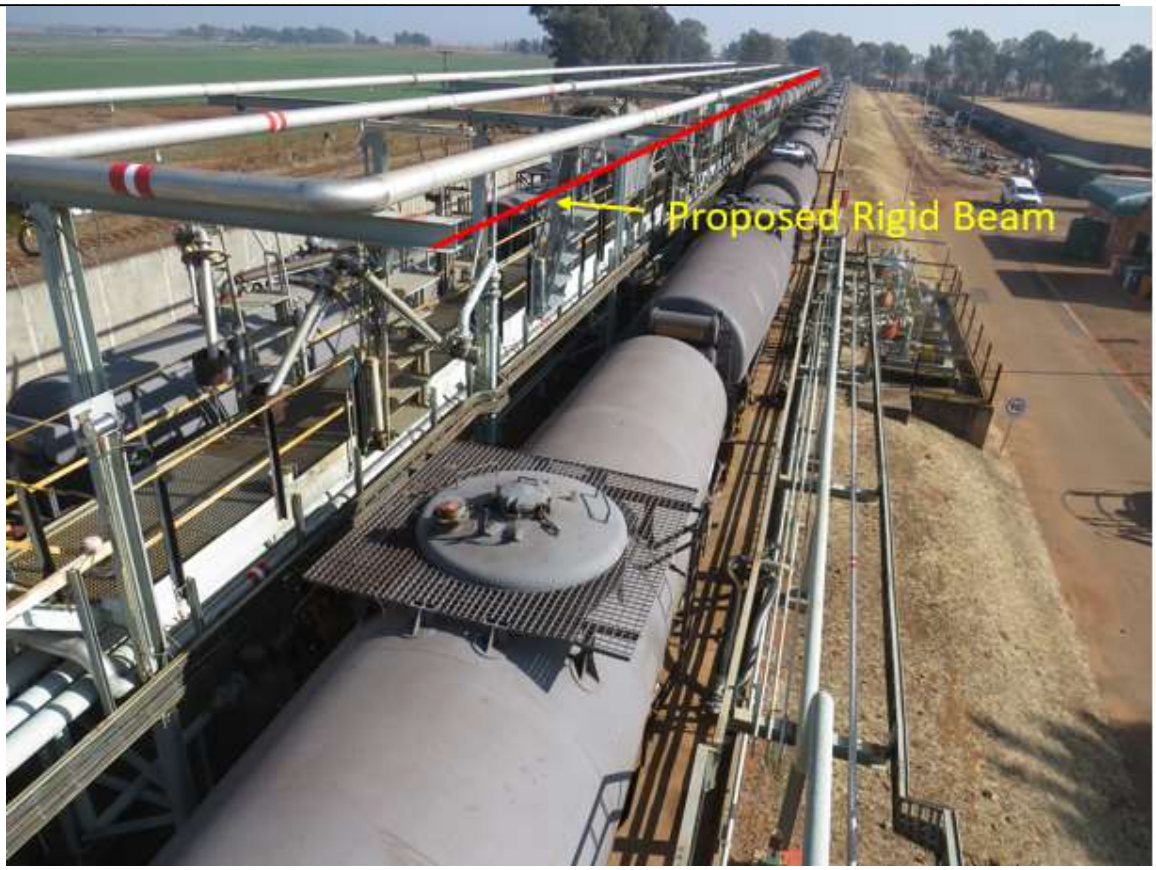

Figure 2: Current Rail Tanker Loading Facility at Tarlton Depot indicating the proposed Rigid Rail Fall Protection System Solution for Road Loading Facility

The fall arrest system shall have the capacity to protect two workers in a non-simultaneous fall at each Road and Rail Tanker

6.2 Site Specific Requirements

6.2.1 Working Hours

Site working hours are from 07:00am to 16:00pm weekdays only. Work outside normal working hours can be arranged with TPL Project Manager.

6.2.2 Site Facilities

The ablution facilities will be provided, and the on-site offices will be provided on ad-hoc basis.

6.2.3 Health, Safety & Environmental

The Contractor will be required to comply with the TPL site Health, Safety & Environmental requirements, and will be required to submit a safety file containing but not limited to the following:

- Letter of Good Standing with the Compensation Commissioner
- 37(2) Agreement
- Method Statement
- Welding certification and appointment should any be done on site as part of the installation
- Safety management plan
- Environmental management plan
- Relevant Legal Appointments
- Acknowledged notification to the Department of Employment and Labour of construction work
- Fall protection plan
- Police Clearance (National Key Point requirement)
- Valid medical certificates of fitness inclusive of work at height criterion
- Incident declaration
- Contravention notice declaration

All Contractor personnel with be required to undergo site induction prior to starting work.

Flame Retardant Overalls and Personal Protective equipment must be provided by the Contractor for his personnel working on site.

A risk assessment will be conducted on all tasks and a daily permit will be issued for each task. All issued permits will be closed at the end of each day.

7. SCOPE OF WORKS

This scope of work sets out Transnet Pipelines requirements for the fabrication, installation, and testing of a Fall Arrest System (FAS), for Road and Rail Loading Facilities. The Fall Arrest

System should be in accordance with the drawings attached (**see Annexure A**). The required system for both Road and Rail Loading Facility shall be as follows:

- The fall arrest system shall utilize a steel beam.
- The system shall be supported from the existing structural steel in this case overhead beams.
- The system shall be manually operated by one worker.
- The arrest beam shall be located over the centre line of the tanker bay.
- The system shall include two energy shock-absorbing lanyards each with an arresting force of 6 kN (or approximately 600kg). The system shall have two personnel hoist trolleys with steel wheels to which the User will attach the retractable lanyards. Each personnel trolley shall travel smoothly and independently of the other (trolley) along the length of the fall arrest beam
- The Beam System shall include new fall protection harnesses:
  (a) Weight Capacity for each harness: 600kg
  (b) Washable, mesh-lined, with removable shoulder, hip and leg padding; lightweight polyester webbing.
  (c) Five-point adjustment system, with one-handed quick connect buckles, including torso buckles.
  (d) Built-in belt loops
  (e) Back D-Rings. Coated hardware for corrosion resistance
  (f) Meet or exceed all applicable standards
- The system shall be designed to allow the User to walk uninterrupted the entire length of the top of the tanker without having to unhitch from the fall protection system to pass through intermediate support points
- Each hoist trolley shall have a rotating eye assembly for attaching lanyards
- The rotating eye shall allow 360 degrees free continuous movement to avoid tangling of the lanyard and harness
- The assumed weight for each worker shall be 140 kg, including clothing, tools, and other-borne objects
- The system shall not allow a worker to fall more than 1,8 metres nor contact any lower level

7.1 Road Loading Facility

Fabricate and install four FAS in the Road Load Facility Bays (Refer to Annexure A- PL 122549 Sheet 1 and 2).

- Supply galvanized steel beams (IPE 160 I-Section).
- Supply galvanized Beam Hangers (IPE 140 I-Section).
- Supply galvanized End plates that will be welded on the Beam hangers.
- Supply galvanized fastening components.
- Supply six beam trolleys that will withstand the maximum required load of 140kg and compatible to IPE 160 I-Beam Section.
- Supply six Self-Retracting Lifelines.
- Supply four energy shock-absorbing lanyards each with an arresting force of 6 kN (or approximately 600kg).
- Supply maximum loading signage (140kg).
- Install maximum loading signage on each Beam.
- Develop and supply fabrication drawings for approval and acceptance by TPL.
- Fabricate steel material off-site.
- Transport fabricated material to site (Tarlton Depot).
- Install four FAS in the Road Loading Facility.
- Test, Commission the FAS and produce load test certificate.

7.2 Rail Loading Facility

Fabricate and install two FAS in the Rail Load Facility Bays (Refer to Annexure A- PL 122548 Sheet 1 and 2)

- Supply galvanized steel beams (IPE 180 I-Section)
- Supply galvanized steel bracing (IPE 120 I-Section)
- Supply connection plates for bracing
- Supply connection plates for splicing
- Supply galvanized fastening components
- Supply four beam trolleys that will withstand the maximum required load of 140kg and compatible to IPE 180 I-Beam Section
- Supply four Self-Retracting Lifelines.

- Supply two energy shock-absorbing lanyards each with an arresting force of 6 kN (or approximately 600kg).
- Supply maximum loading signage (140kg).
- Install maximum loading signage on each Beam.
- Develop and supply fabrication drawings for approval and acceptance by TPL
- Fabricate steel material off-site
- Transport fabricated material to site (Tarlton Depot)
- Install two FAS in the Rail Loading Facility
- Test, Commission the FAS and produce load test certificate

8. DESCRIPTION OF THE SITE AND ITS SURROUNDINGS

8.1 General description

The area over which the Works are to be constructed lies within TPL's Tarlton Depot. The depot is located near the intersection of the N14 and R24, west of Krugersdorp, Gauteng, South Africa. The GPS co-ordinates of the site are 26°04'42.04" S 27°38'24.19" E

9. QUALITY ASSURANCE AND CONTROL REQUIREMENTS

9.1 The Contractor must provide the necessary quality management system to ensure that the quality of the service complies with the requirements of the scope.

9.2 The Contractor must provide a Quality Control Plan for review identifying all activities associated with fabrication and installation work. The Employer identifying any required hold or witness points will review the Quality Control Plan.

10. SITE WORK AND PROCEDURES

10.1 The Employer and others have specific site work and procedures for these facilities and the Contractor, and all his personnel are required to be familiar with and comply with these procedures, and their latest revisions, as may be required.

11. APPLICABLE CODES AND GUIDELINES

Although not bound in nor issued with this document, the relevant codes and guidelines are to be adhered to in the rendering of the services. The Contractor is expected to have

unrestricted access to these documents as well as possess sufficient knowledge and expertise of the codes and guidelines contained within them.

CODES and LEGISLATIVE

OHS Act	Occupational Health and Safety Regulations
SANS 50354	Lanyards
SANS 50355	Energy absorbers
SANS 50358	Belts for work position and restraints
SANS 50361	Full body harness
SANS 50362	Connectors
SANS 50363	Fall arrest systems

TRANSNET PIPELINES SPECIFICATIONS

The following TPL Standards & Specifications will apply.

PL100	Drawing Standards
PL103	General Drawing Standard

12. ENVIRONMENTAL AND SUSTAINABILITY MANAGEMENT

The Contractor shall have the required environmental expertise and experience to manage all environmental and sustainability requirements during execution of the work.

13. RISK MANAGEMENT

13.1 It is the Contractor's obligation to proactively manage and mitigate against all risk.

13.2 Where suitable the Project Manager and the Contractor shall discuss which risks are best managed by whom and necessary delegations shall be provided to ensure that party has authority to manage accordingly.

13.3 The Contractor shall be transparent and open in the approach to risk management with the Employer.

14. SECURITY MANAGEMENT

14.1 The security at all Transnet Sites shall be undertaken in accordance with the Transnet Security Policy.

14.2 The Contractor shall ensure that all operations (including contractors and other 3rd parties) are undertaken in a controlled and safe manner.

14.3 The Contractor shall report on all incidents under the entire ambit of the project.

15. ANNEXURES

Annexure	Drawing/Document No	Description
Annexure A	PL 122548 Sheet 1	Rail Loading Fall Protection System Plan
Annexure A	PL 122548 Sheet 2	Rail Loading Fall Protection Connection Details
Annexure A	PL 122549 Sheet 1	Road Loading Fall Protection System Plan
Annexure A	PL 122549 Sheet 2	Road Loading Fall Protection Connection Details