
TRANSNET SOC LTD

TENDER No. WRAC-BLQ-41057: SUPPLY, DELIVERY AND INSTALLATION OF A FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT

ADDENDUM NO. 2

DATED 16 OCTOBER 2023

The following information is furnished in addition to, in amplification and substitution of, matters contained in the tender documents issued in respect of the abovementioned work.

Part C2: Pricing Data

C2.2 Bill of Quantities

Omit the Bill of Quantities and replace with revised Bill of Quantities.

This addendum must be signed and submitted with your tender.

WITNESSES:

1. _____
2. _____

TENDERER / CONTRACTOR

Date: _____

FROM : _____

DATE : _____

**TO : Transnet Freight Rail
Transnet Park Building
(Attention Ms. Estelle van Wyk- estelle.vanwyk@transnet.net)**

Dear Sirs

**TENDER No. WRAC-BLQ-41057: SUPPLY, DELIVERY AND INSTALLATION OF A
FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT**

Receipt of **Addendum No. 2** dated **16 October 2023** is hereby acknowledged.

Kind regards

TENDERER

NOTE : This acknowledgement must be signed and returned to this office on or before closing date of tender.

Ref: WRAC-BLQ-41057

ADDENDUM NO. 002

Transnet Freight Rail

Contract Number: WRAC-BLQ-41057

Description of the Works: SUPPLY, DELIVERY AND INSTALLATION OF A FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT



PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option B	3
C2.2	The <i>bill of quantities</i>	15

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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 and 2013 (ECC) Option B states:

**Identified
and defined
terms**

11

11.2

(21) The Bill of Quantities is the *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

(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 *Contractor* 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 *Contractor* 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 ECC 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

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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.
- 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.

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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- 2.2.5. 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.

2.3. Departures from the *method of measurement*

2.4. Amplification of or assumptions about measurement items

For the avoidance of doubt the following is provided to assist in the interpretation of descriptions given in the *method of measurement*. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in this section shall be used.

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C2.2 The *bill of quantities*

ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	SANS 1200A	PRELIMINARY & GENERAL				
1.1		FIXED-CHARGE AND VALUE RELATED ITEMS				
1.1.1		Contractual Requirements				
1.1.1.1		Fixed preliminary and general charges	Item	1		
1.1.1.2		Value related preliminary and general charges	Item	1		
1.1.2		Establishment of Facilities on the Site				
1.1.2.1		Facilities for Engineer				
		a) Furnished Offices (1No)	Item	1		
		b) Nameboard (1No)	Item	1		
1.1.2.2		Facilities for Contractor				
		a) Offices and storage sheds	Item	1		
		c) Living accommodation	Item	1		
		d) Workshops	Item	1		
		e) Ablution and latrine facilities	Item	1		
		f) Tools and equipment	Item	1		
		g) Water supplies, electrical power and telecommunication	Item	1		
		h) Access and Security	Item	1		
		i) Plant	Item	1		
1.1.3		Removal of Site establishment	Item	1		
1.1.4		Removal of Rubble and Waste from Site	Item	1		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
1.2		TIME RELATED ITEMS				
1.2.1		Contractual Requirements	Months	6		
1.2.2		Supervision for duration of construction	Months	6		
1.2.3		Company and Head Office overhead costs for the duration of the contract	Months	6		
1.2.4		Project All Risk Insurance for the Duration of the Contract	Months	6		
1.2.5		Community Liason Officer per month	Months	6		
1.2.6		Profit on Item 1.2.5 above @ 10%	%	10%		
1.3		Training, O&M manuals and Performance Certificates				
1.3.1		Training of operators and maintenance teams	No	6		
1.3.2		Accredited training for workers complete with certificates	No	6		
1.3.3		O&M manuals for all equipment offered	Sum	1		
1.3.4		Performance Certificates for tests carried out to meet design criteria	Sum	1		
1.4		Protection and Relocation of any Existing Services found on site	Item	1		
1.5		DAY WORK				
1.5.1		Labourers				
		(a) Unskilled	hour	1000		
		(b) Semi-skilled	hour	1000		
		(c) Skilled	hour	1000		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
1.5.2		Plant				
		(a) Air compressor, 4m ³ /min, complete with drills	hour	50		
		(b) Pump Lifting Crane in Pump Station - 2500kg	hour	20		
		(c) Welding	hour	75		
1.6		COMPLIANCE WITH OHS ACT AND REGULATIONS (INCLUDING THE CONSTRUCTION REGULATIONS 2014)	Item	1		
1.7		Workshop/ Detailed Design Drawings for the Entire Project- Subject to Approval by Engineers	Item	1		
1.8		As built drawings	Item	1		
1.9		Maintenance and Repairs during the Defects Liability Period	Months	12		
		Total Carried to Final Summary (Preliminary and General)				R
2		BELLVILLE DIESEL DEPOT - FIRE PROTECTION				
2.1		PUMPSETS				
2.1.1		New Single stage volute casing, end suction, centrifugal pump with a duty of 75.6 m ³ /h (21.0 l/s) at a speed of 1450 rpm, against a head of 79.6 metres, and hydraulic efficiency of at least 70%. Engineer to give prior approval before purchase order is made.				
		(a) Supply	No	2		
		(b) Install	No	2		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
2.1.2		New diesel powered compression ignition engine (CI), Max Shaft power : 40 kW, Min Shaft Power : 20kW, single cylinder, 4 Stroke Cycle with direct injection, Turbocharged engine. Engineer to give prior approval before purchase order is made.				
		(a) Supply	No	2		
		(b) Install	No	2		
2.1.3		Machine guards, coupling, and base plate for pumpsets				
		(a) Supply	No	2		
		(b) Install	No	2		
2.2		PUMP PERFORMANCE MONITORING				
2.2.1		Delivery Pressure Gauge, Wika (100mm dial and filled with glycerine), mounted on each pump delivery side for the new pumpsets, with a range from 0 kPa to 2000 kPa, complete with ball isolating valve and piping				
		(a) Supply	No	2		
		(b) Install	No	2		
2.3		PUMP PROTECTION				
2.3.1		Flow Switch, 1bar, IP65, A Stainless Steel Padle and housing, on the Suction side of Each pump				
		(a) Supply	No	2		
		(b) Install	No	2		
2.3.2		Temperature sensor, PT100 with 4-20mA signal transmission, for the DE bearings of each pump (Nipples to be factory fitted on the pumps, no drilling on site will be acceptable)				
		(a) Supply	No	2		
		(b) Install	No	2		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
2.3.3		Vibration sensor, for the DE bearings of each pump (Nipples to be factory fitted on the pumps, no drilling on site will be acceptable)				
		(a) Supply	No	2		
		(b) Install	No	2		
2.3.4		Pressure Transmitters with alarm contacts, WIKA or equivalent switch with minimum and maximum pressure limits as per the pump head complete with wiring to the MCC and PLC, 4-20mA signal output				
		(a) Supply	No	2		
		(b) Install	No	2		
2.4		DEWATERING PUMP				
2.4.1		Submersible centrifugal pump, complete with integral motor, guide rail, auto-coupling bracket, for sump draining with duty of 8 m ³ /h (2.22 l/s) against a head of 7 metres, complete with level sensors and cabling to main MCC in pump station. The pump start and stop automatically based on sump depth Level. Pump duty shall be confirmed with engineer prior to order placement.				
		(a) Supply	No	1		
		(b) Install	No	1		
2.5		QUALITY ASSURANCE				
2.5.1		Compliance with the Quality Management Plan by an independent accredited specialist consultant				
2.5.2		Pumps Manufacturer's Performance testing and Issuing of Performance certificates as per the Specifications and ISO 9906 Grade 2B , The test is to be conducted at 3 different speeds, namely mean speed, 20% below and above mean speed. Engineer and Employer to witness the tests	Item	1		
		Total Brought Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
2.5.3		Pressure testing of all pipework and fittings using mechanical and x-ray methods with Pressure Test Certificates issued to Engineer in accordance to SANS 716 and SANS 62	No	2		
2.5.4		Site acceptance testing on Two new pumps (contractor to supply all necessary equipment for testing)	Item	1		
2.6		VENTILATION				
2.6.1		Door grille: 600x600mm, installed on an industrial double steel door, complete with a 2 hour rated fire damper.				
		(a) Supply	No	2		
		(b) Install	No	2		
2.6.2		Weather Louvre: 1200x600mm, Aluminium Anodised. C/W 2-hour rated fire damper				
		(a) Supply	No	2		
		(b) Install	No	2		
2.7		Painting and Marking	Sum	1		
2.8		Fire Protection Signage	Item	1		
2.9		Testing and Commissioning of the system	Sum	1		
Total Carried to Final Summary (Fire Pumpstation)						R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3		BELLVILLE DIESEL DEPOT - FIRE PROTECTION				
3.1		PIPEWORK AND FITTINGS				
		Supply, delivery, installation, testing and commissioning of pipework, fittings, bends, elbows, reducers and other listed installations, complete with flanges, gaskets, bolts, nuts and washers, All Flanges to be SANS 1123. Refer to Pipe schedule in the drawings book.				
		<i>Tenderer should be in possession of the Drawing when pricing this section. Dimensions are on the drawing.</i>				
3.1.1		Item 1 - 100 NB SANS 62 Steel T-Piece, All ends flanged	No.	1		
3.1.2		Item 2 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.3		Item 3 - 100 NB SANS 62 Steel 90° bend, All ends flanged	No.	5		
3.1.4		Item 4 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.5		Item 5 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.6		Item 6 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.7		Item 7 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.8		Item 8 - 100 NB PN10 Flanged, Float operated, isolation valve.	No.	1		
3.1.9		Item 9 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.10		Item 10 - 100 NB Flanged, PN10, Ultrasonic flow meter	No.	1		
3.1.11		Item 11 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.12		Item 12 - 100 NB SANS 62 Steel 90° bend, All ends flanged	No.	11		
3.1.13		Item 13 - 100 NB SANS 62 Steel T-Piece, All ends flanged	No.	1		
3.1.14		Item 14 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
3.1.15		Item 15 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.16		Item 16 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.17		Item 17 - 100 NB PN16 Flanged, Butterfly isolation valve.	No.	4		
3.1.18		Item 18 - 100 NB SANS 62 Steel pipe, with 25NB Nipple for Flow Switch, All ends flanged	No.	2		
3.1.19		Item 19 - 100 NB SANS 62 Steel 90° bend, All ends flanged	No.	2		
3.1.20		Item 20 - Diesel Operated Fire Pumpset	No.	2		
3.1.21		Item 21 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.22		Item 22 - 100 NB SANS 62 Steel pipe, with 25NB Nipple for Pressure gauge, All ends flanged	No.	2		
3.1.23		Item 23 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.24		Item 24 - 100 NB PN16 Flanged, Swing type, Non Return Valve.	No.	2		
3.1.25		Item 25 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.26		Item 26 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.27		Item 27 - 100 NB SANS 62 Steel T-Piece, All ends flanged	No.	2		
3.1.28		Item 28 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.29		Item 29 - 100 NB to 100 NB SANS 62 Steel T - Piece, All ends flanged	No.	2		
3.1.30		Item 30 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.31		Item 31 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.32		Item 32 - 100 NB SANS 62 Steel 90° bend, All ends flanged	No.	2		
3.1.33		Item 33 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
3.1.34		Item 34 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.35		Item 35 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.36		Item 36 - 100 NB SANS 62, double Fire brigade booster	No.	1		
3.1.37		Item 37 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.38		Item 38 - 100 NB to 100 NB SANS 62 Steel T - Piece, All ends flanged	No.	1		
3.1.39		Item 39 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.40		Item 40 - 100 NB TO 65 NB SANS 62 Steel Eccentric reducer, All ends flanged	No.	2		
3.1.41		Item 41 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.42		Item 42 - 100 NB PN16 Flanged, Deluge type, Sprinkler control valve.	No.	2		
3.1.43		Item 43 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.44		Item 44 - 65 NB SANS 62 Steel 90° bend, All ends flanged	No.	12		
3.1.45		Item 45 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.46		Item 46 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.47		Item 47 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.48		Item 48 - 100 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.49		Item 49 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.50		Item 50 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
3.1.51		Item 51- 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.52		Item 52 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	12		
3.1.53		Item 53 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.54		Item 54 - 65 NB to 65 NB SANS 62 Steel T - Piece, All ends flanged	No.	2		
3.1.55		Item 55 - 65 NB SANS 62 Ring Steel pipe around the Diesel tanks, with 11 off 25 NB spigoted Internally threaded pipes for mounting nozzles, and nozzles, All ends flanged	No.	2		
3.1.56		Item 56 - 65 NB PN16 Flanged, Actuated Wedge type, Gate Valve valve.	No.	2		
3.1.57		Item 57 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.58		Item 58 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.59		Item 59 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.60		Item 60 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.61		Item 61 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.62		Item 62 - 80 NB SANS 62 Steel 90° bend, All ends flanged	No.	8		
3.1.63		Item 63 - 100 NB TO 80 NB SANS 62 Steel Eccentric reducer, All ends flanged	No.	2		
3.1.64		Item 64 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.65		Item 65 - 80 NB PN16 Flanged, Actuated Wedge type, Gate Valve valve.	No.	2		
3.1.66		Item 66 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.67		Item 67 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.68		Item 68 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
3.1.69		Item 69 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.70		Item 70 - 65 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.71		Item 71 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	1		
3.1.72		Item 71 - 80 NB SANS 62 Steel pipe, All ends flanged	No.	2		
3.1.73		Fire Monitor Nozzle Spray, 19l/s @ 5Bar	No.	2		
Total carried to Final Summary (Pipework and Fittings)						R
4		BELLVILLE DIESEL DEPOT - FIRE PROTECTION				
		FIRE DETECTION				
4.1	SANS 10139	Supply, delivery, installation, commissioning and testing of an Automatic Fire Detection system complete with all the wiring, conduits and certificates.				
4.1.1	FP1	2 Loop Addressable fire detection control panel incl batteries				
		(a) Supply	No	1		
		(b) Install	No	1		
4.1.2		Heat detectors, complete with base plates				
		(a) Supply	No	4		
		(b) Install	No	4		
4.1.3		Digital temperature sensor probe, incl wiring, +- 0.5deg C accuracy, Stainless steel housing.				
		(a) Supply	No	4		
		(b) Install	No	4		
4.1.4		Loop Sounder, Sirens				
		(a) Supply	No	1		
		(b) Install	No	1		
		Total carried forward				R

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Transnet Freight Rail

Contract Number: WRAC-BLQ-41057

Description of the Works: SUPPLY, DELIVERY AND INSTALLATION OF A FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT



ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total Brought Forward				R
4.1.5		PH60 Fire cable in ø25mm galvanised conduits				
		(a) Supply	No	300		
		(b) Install	No	300		
4.1.6		Interfacing with MCC, Testing and Commissioning	Item	1		
4.1.7		Provide Manuals and technical literature for the system and its components	Item	1		
		Total Carried to Final Summary (Fire Detection)				
5		BELLVILLE DIESEL DEPOT - FIRE PROTECTION				
		ELECTRICAL				
5.1		<u>Excavation and Trenching</u>				
		Allowance must be made for the sifting of soil when required, removal and carting away of all stones and rocks including dumping off site. Backfilling and compaction shall be carried out as specified for overall siteworks.				
5.1.1		Excavation and backfilling in soft soil	m ³	21		
5.1.2		Excavation and backfilling in hard rock	m ³	21		
5.2		<u>Low Voltage PVC Cables and Bare Copper Earth Wire</u>				
		Supply and installation of PVC SWA PVC cable and Bare Copper Earth Wire in trenches				
5.2.1		25mm ² 4 core PVC SWA Cable(From TRF to Main DB)				
		(a) Supply	m	100		
		(b) Install	m	100		
		Total carried forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
5.2.2		16mm ² 4 core PVC SWA Cable(For Actuators)				
		(a) Supply	m	75		
		(b) Install	m	75		
5.2.3		4mm ² 4 core PVC SWA Cable(For flow meters, deluge valves and pressure transmitters)				
		(a) Supply	m	100		
		(b) Install	m	100		
5.2.4		6mm ² 3 core PVC House Wire Cable				
		(a) Supply	m	100		
		(b) Install	m	100		
5.2.5		25mm ² Bare Copper Earth Wire				
		(a) Supply	m	100		
		(b) Install	m	100		
5.3		<u>Cables Terminations:</u>				
		Supply and installation of steel glands complete with shroud				
5.3.1		No. 4 Gland complete with Shroud				
		(a) Supply	No	20		
		(b) Install	No	20		
5.3.2		No. 3 Gland complete with Shroud				
		(a) Supply	No	12		
		(b) Install	No	12		
5.3.3		4mm Crimping Lug				
		(a) Supply	No	10		
		(b) Install	No	10		
		Total carried forward				R

ADDENDUM NO. 002**TRANSNET**

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Description of the Works: SUPPLY, DELIVERY AND INSTALLATION OF A FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT



ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
5.3.4		16mm Crimping Lug				
		(a) Supply	No	24		
		(b) Install	No	24		
5.3.5		25mm Crimping Lug				
		(a) Supply	No	48		
		(b) Install	No	48		
5.4		<u>Motor Control Centre</u>				
5.4.1		Supply, delivery, installation, testing and commissioning of Motor Control Centre, complete with isolators, breakers, on/off selectors, ammeters, hour meter readings, flow rate, instantaneous flow, cumulative flow, and control gear for deluge valves, actuators, flow control valves and fire detection as further specified and as per drawing provided.				
		(a) Supply	No	1		
		(b) Install	No	1		
5.4.2		Variable torque to drive a 49 kW diesel pump by throttling the fuel via solenoid, EMC filter, SLV Control, Integrated PLC, OLED Display, IP55 enclosure and Optional Fieldbus Modules, and integral power factor correction	Sum	1	Included	
5.5		<u>Cable Trays</u>				
		Supply and installation of heavy duty cable tray below complete with accessories				
5.5.1		250mm width 1,5mm thickness heavy duty cable tray				
		(a) Supply	m	30		
		(b) Install	m	30		
		Total carried forward				R

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Contract Number: WRAC-BLQ-41057

Description of the Works: SUPPLY, DELIVERY AND INSTALLATION OF A FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT



ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
5.5.2		250mm Horizontal bend 90°				
		(a) Supply	No	5		
		(b) Install	No	5		
5.5.3		250mm T Piece				
		(a) Supply	No	2		
		(b) Install	No	2		
5.6		<u>Others</u>				
5.6.1		Cable Warning Tape				
		(a) Supply	No	200		
		(b) Install	No	200		
5.6.2		Concrete Cable Markers				
		(a) Supply	No	10		
		(b) Install	No	10		
5.6.3		16 MVA Standing Meter kiosk				
		(a) Supply	No	1		
		(b) Install	No	1		
5.7		<u>Control and Instrumentation Works</u>				
5.7.1		Integration of instruments into the PLC & configuration with fire detection for operation as specified				
		(a) Supply	Item	1		
		(b) Install	Item	1		
5.7.2		Hardware & cabling (Instruments and cabling measured elsewhere)				
		(a) Supply	Lot	1		
		(b) Install	Lot	1		
		Total carried forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
5.7.3		UPS (10kVA single phase, 230V-230V)				
		(a) Supply	each	1		
		(b) Install	each	1		
5.7.4		Remote monitoring				
		(a) Supply	Sum	1		
5.8		<u>Testing and Commissioning</u>				
5.8.1		Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.	Item	1		
		Total carried to Final Summary (Electrical and Control)				R
6.		Steel Tank				
6.1.1		Supply and install a SANS approved 4x4x3modules deep pressed steel sectional water tank, complete with access ladders.	Each	1		
6.1.2		Supply and install a water level indicator for the tank	Sum	1		
6.1.3		Supply and install a float level control valve for the tank	Sum	1		
6.2		STEEL FRAMING				
		Supply and install a Hot rolled steel to SANS as per drawing. All steel to be treated with Hot Dip Galvanizing to SANS 121.				
		Total Carried Forward				R

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ITEM	REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Total brought forward				R
6.2.1		C - Channel - 125x65x6mm thickness	m	28.4		
6.2.2.		Equal Angel - 65x65x6mm thickness	m	13.62		
6.2.3		Flat sheet - 300mm x 15mm thickness or similar anchored @ 1m c/c	m	25		
6.2.4		1200x850 Cast Iron Manhole cover and Frame	No.	1		
6.3		<u>RESERVOIR PIPEWORK</u>				
6.3.1		Inlet pipe 110mm dia GMS pipe	m	5		
6.3.2		Outlet pipe 110mm dia GMS pipe	m	5		
6.3.3.		Scour pipe 110mm dia GMS pipe	m	5		
6.3.4		Cast Iron bends	Sum	1		
6.3.5		110mm Diameter 90°	No.	7		
6.3.6		Clean and sterilize tank and all pipes from reticulation to tank:	Sum	1		
6.3.7		Fill tank to full supply level with water and test for water tightness	Sum	1		
Total carried to Final Summary (Steel Tank)						R

ADDENDUM NO. 002

Transnet Freight Rail

Contract Number: WRAC-BLQ-41057

Description of the Works: SUPPLY, DELIVERY AND INSTALLATION OF A FIREFIGHTING SYSTEM AT THE BELLVILLE DIESEL DEPOT

**FINAL SUMMARY**

Item No.	Description	Amount
1	Preliminary and General	
2	Fire Pumpstation	
3	Pipework and Fittings	
4	Fire Detection	
5	Electrical and Control	
6	Steel Tank	
	Total excl. VAT carried to C1.1 Form of Offer	R