



PART C2: PRICING DATA

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Contractor

Witness 1

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Employer

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C2.1 PRICING INSTRUCTIONS

1. Measurement and payment shall be in accordance with the relevant provisions of Clause 8 of each of the SANS 1200 Specifications for Civil Engineering Construction referred to in the Scope of Work. The Preliminary and General items shall be measures in accordance with the provisions of SANS 1200-A, General:

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

| | | | | | |
|----------------------|---|-----------------------|----------|---|------------------|
| mm | = | millimetre | h | = | hour |
| m | = | metre | kg | = | kilogram |
| km | = | kilometre | t | = | ton (1000 kg) |
| m ² | = | square metre | No. | = | number |
| m ² -pass | = | square metre-pass | sum | = | lump sum |
| ha | = | hectare | MN | = | meganewton |
| m ³ | = | cubic metre | MN.m | = | meganewton-metre |
| m ³ -km | = | cubic metre-kilometre | P C sum | = | Prime Cost sum |
| ℓ (L) | = | litre | Prov sum | = | Provisional sum |
| kl | = | kilolitre | % | = | per cent |
| MPa | = | megapascal | kW | = | kilowatt |
| W/day | = | Work day | | | |

3. For the purpose of the Bill of Quantities, the following words shall have the meanings hereby assigned to them:

- Unit: The unit of measurement for each item of work as defined in the Scope of Works and Specifications.
- Quantity: The number of units of work for each item.
- Rate: The agreed payment per unit of measurement.
- Amount: The product of the quantity and the agreed rate for an item.
- Lump sum: An agreed amount for an item, the extent of which is described in the Bill of Quantities but the quantity of work of which is not measured in any units.

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

5. The prices and rates to be inserted in the Bill of Quantities are to be fully inclusive prices for the work described under the various items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

Contractor

Witness 1

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Employer

Witness 1

Witness 2



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6. It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.sabs.co.za or www.iso.org for information on standards).
 7. Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered for such items.
 8. A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities.
 9. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities. A single lump sum will apply should a number of items are grouped together for pricing purposes.
 10. Reasonable compensation will be received where no pay item appears in respect of work required in terms of the Contract which is not covered in any other pay item.
 11. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work. Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the SANS 1200 Standardised Specifications.
 12. The quantities set out in these Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in this Bill of Quantities.
 13. The Contractor shall bear all the costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required for the purposes of the Works.
 14. The quantities of work as measured and accepted and certified for payment in accordance with the Conditions of Contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities certified for payment.

Ordering of materials are not to be based on the Bill of Quantities, but only on information issued for construction purposes.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2



C2.2 BILL OF QUANTITIES

PREAMBLE TO BILL OF QUANTITIES

General

1. The tender data, the Contract Data, the Scope of the Work and the Site Information are to be read in conjunction with the Bill of Quantities.
 - a) The Bill of Quantities comprises items covering the Contractor's profit and costs of general liabilities and of construction of temporary and permanent Works.
 - b) The Tenderer is at liberty to insert a rate of his own choosing for each item in the Bill. His attention is drawn to the fact that the Contractor has the right, under various circumstances to payment for additional works carried out, and that the Employer's Agent is obliged to base his assessment of the rates to be paid for such additional work on the rates inserted in the Bill.
 - c) The measurement and payment clauses of each Specification, read together with the relevant clauses of the Specification Data, set out what ancillary or associated activities are included in the rate for the operations specified.
2. Descriptions in the Bill are abbreviated and must be read in conjunction with the measurement and payment clauses of the applicable Specifications.
3. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste.
4. Except that the rates shall not include Value Added Tax (VAT). The prices and rates to be inserted in the Bill of Quantities are to be the full, inclusive prices, to the Employer for the work described under each item. Such prices shall cover all costs and expenses that may be required in, and for the construction of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based. Provision is made in the Summary to the Bill of Quantities for VAT to be added.
5. A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to have a price or rate of R0,00.
6. The Tenderer must price and extend each item, total each page and carry the total of each section in the Bill of Quantities to the Summary page.

Contractor

Witness 1

Witness 2

Employer

Witness 1

Witness 2

**CONSTRUCTION****Attention is drawn to Clause 6.7.1 of the General Conditions of Contract:**

The Contractor must not order the quantities of materials stated in the Bill of Quantities until he has confirmed, from the construction drawings or measurement on Site, that such quantities are in fact the correct quantities.

The Gross Total of tender must be carried to the Offer.

MEASUREMENT AND PAYMENT

The measurement and payment clauses of the SANS 1200 Standardized Specifications and the Standard and Particular Specifications as amended or added to in Part C3, Specification Data, shall be deemed to form part of and be included in the Pricing Instructions.

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| SUMMARY | | Amount | |
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| 1 | SECTIONS 1: PRELIMINARY AND GENERAL | | |
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| 15 | SECTION 15: 5100 PITCHING | | |
| 16 | SECTION 16: 7300 CONCRETE BLOCK PAVING | | |
| 17 | SECTION 17: 8100 TEST MATERIALS | | |
| SUB-TOTAL | | | |
| * CONTINGENCIES Allow the sum of 10% (TEN percent) of the above Sub-total for Contingencies to be spent as the Employer's Agent may direct and to be deducted in whole or in part if not required. | | | |
| TOTAL INCLUDING CONTINGENCIES | | | |
| PRICE ESCALATION ALLOWANCE OF 10 % | | | |
| TOTAL INCLUDING PRICE ESCALATION | | | |
| VALUE ADDED TAX ADD: VAT at the rate of 15% | | | |
| TOTAL Carried to part C1.1 Form of Offer and Acceptance | | | |
| CONTRACT PERIODWEEKS | | | |
| * Amount allowed for the use of the Employer's Agent only. | | | |



Contractor



Witness 1



Witness 2



Employer



Witness 1



Witness 2

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|----------------------|--|------|-----|------|--------|
| | SABS 1200A | SECTION 1: PRELIMINARY AND GENERAL | | | | |
| 1 | 8.3 PSA 8.2.1 | SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS | | | | |
| 1.1 | 8.3.1 | <u>Contractual Requirements</u> | | | | |
| | | <u>Fixed Items</u> | | | | |
| 1.2 | PSA 8.3.1a | Contractors all risk insurance provided by Contractor | Sum | 1 | | |
| | PSA 8.3.2 | <u>Establishment of Facilities on the Site</u> | | | | |
| | PSA 8.3.2.1 | <u>Facilities for Engineer</u> | | | | |
| 1.3 | PSAB 3.2 | a) Furnished office for Resident Engineer suitable for site meetings | Sum | 1 | | |
| 1.4 | PSAB 4.1 | b) One Cellular phone | Sum | 1 | | |
| 1.5 | PSAB 3.1 PSAB 5.1 | c) Nameboard as per drawing | Sum | 2 | | |
| 1.6 | PSAB 5.5 | d) Two survey assistants and equipment | Sum | 1 | | |
| 1.7 | PSAB 3.2 | e) One Carport as specified | Sum | 1 | | |
| 1.8 | | f) Provision of monthly as-built" records to the Engineer" | Sum | 1 | | |
| 1.9 | | g) Ablution and latrine facilities | Sum | 1 | | |
| 1.10 | | h) Laptop - 4.7GHz Processor , 16 GB RAM,512 SSG HD, with USB port min. Core i11 or similarly approved, complete with Windows 10 Professional operating system & MS Office | Sum | 1 | | |
| | | <u>Facilities for Contractor</u> | | | | |
| 1.11 | PS 6.2 PSA 4.2 | a) Offices and storage sheds | Sum | 1 | | |
| 1.12 | | b) Workshops | Sum | 1 | | |
| 1.13 | PS 6.3 | d) Living accommodation | Sum | 1 | | |
| 1.14 | | e) Ablution and latrine facilities | Sum | 1 | | |
| 1.15 | | f) Tools and equipment | Sum | 1 | | |
| 1.16 | PS 6.1 | g) Water supplies, electric power and communications | Sum | 1 | | |
| 1.17 | | h) Dealing with water (Subclause 5.5) | Sum | 1 | | |
| 1.18 | PS 8.6 | i) Access (Subclause 5.8) | Sum | 1 | | |
| 1.20 | PS 5 | l) Digital camera to take digital photographs of existing stuctures, roads and obstructions on the pipeline routes and submit to the Engineer (remains the property of the contractor) | Sum | 1 | | |
| 1.21 | 8.3.3 PSA 8.8.5 | <u>Other fixed-charge obligations (Specify)</u> | Sum | 1 | | |
| 1.22 | 8.3.4 | Removal of Site Establishment | Sum | 1 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|-------------------|---|---------|-----|------|--------|
| BROUGHT FORWARD | | | | | | |
| 1.23 | PSA 8.4 PSA 8.2.2 | SCHEDULED TIME-RELATED ITEMS | | | | |
| 1.24 | 8.4.1 | Contractual Requirements | Month | 12 | | |
| | 8.4.2 | <u>Operation and Maintenance of Facilities on Site, for Duration of Construction, except where otherwise stated</u> | | | | |
| | PSA 8.4.2.1 | Facilities for Engineer | | | | |
| 1.25 | PSAB 3.2 | a) Furnished office for Resident Engineer suitable for site meetings and accomdation | Month | 12 | | |
| 1.26 | PSAB 4.1 | b) One Cellular phone | Month | 12 | | |
| 1.27 | PSAB 3.1 PSAB 5.1 | c) Nameboard as per drawing | Month | 12 | | |
| 1.28 | | d) Two survey assistants and equipment | Month | 12 | | |
| 1.29 | PSAB 3.2 | e) One Carport as specified | Month | 12 | | |
| 1.30 | PS 15.1 | f) Provision of monthly as-built" records to the Engineer" | Month | 12 | | |
| 1.31 | | g) Ablution and latrine facilities | Month | 12 | | |
| | PSA 8.4.2.2 | Facilities for Contractor | | | | |
| 1.33 | PS 6.2 PSA 4.2 | a) Offices and storage sheds | Month | 12 | | |
| 1.34 | | b) Workshops | Month | 12 | | |
| 1.35 | PS 6.3 | d) Living accommodation | Month | 12 | | |
| 1.36 | | e) Ablution and latrine facilities | Month | 12 | | |
| 1.37 | | f) Tools and equipment | Month | 12 | | |
| 1.38 | PS 6.1 | g) Water supplies, electric power and communications | Month | 12 | | |
| 1.39 | PSA 8.4.5 | h) Dealing with water (Subclause 5.5) | Month | 12 | | |
| 1.40 | PS 8.6 | i) Access (Subclause 5.8) | Month | 12 | | |
| 1.41 | | k) One printer | Month | 12 | | |
| 1.42 | PS 5 | l) Digital camera to take digital photographs of existing stuctures, roads and obstructions on the pipeline routes and submit to Engineer | Month | 12 | | |
| 1.43 | 8.4.3 | Supervision for Duration of Construction | Month | 12 | | |
| 1.44 | 8.4.4 | Company and Head Office Overhead Costs for the Duration of the Contract | Month | 12 | | |
| 1.45 | 8.4.5 PSA 8.8.5 | Other Time-related Obligations (Specify) | Month | 12 | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | PS A 8.4.6 | Standing time costs | | | | |
| 1.46 | | a) Plant | Sum/day | 10 | | |
| 1.47 | | b) Labour | Sum/day | 10 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|-----------|--|----------|--------------|--------------|--------------|
| BROUGHT FORWARD | | | | | | |
| | 8.7 | Dayworks | | | | |
| | | a) Plant | | | | |
| 1.50 | | (i) Air compressor, 10m ³ /min, complete with drills, jack hammer etc. | hr | 50 | | |
| 1.51 | | (ii) Drain sewer/water from manholes or any other structure identified by the Employer's Agent using submersible pump/s. | hr | 50 | | |
| 1.52 | | (iii) Truck 10m ³ with operator | hr | 100 | | |
| 1.53 | | (iv) Concrete mixer 0.5m ³ | hr | 100 | | |
| 1.54 | | (v) Excavator 20T | hr | 100 | | |
| 1.55 | | (vi) Watercart 10 kl | hr | 100 | | |
| | | b) Labour | | | | |
| 1.56 | | (i) Unskilled | hr | 100 | | |
| 1.57 | | (ii) Artisans | hr | 100 | | |
| 1.58 | | (iii) Survey assistants | hr | 100 | | |
| 1.59 | | c) Material | Prov Sum | | R 15 000.000 | R 15 000.00 |
| 1.60 | | c) Overheads, charges and profit on (c) above | % | R 15 000.000 | | |
| | 8.5 | SUMS STATED PROVISIONIALLY BY ENGINEER | | | | |
| | 8.5 | (Paid only on discretion of the Employer) | | | | |
| 1.61 | | a) Relocation of existing services | Prov Sum | | R 50 000.000 | R 50 000.00 |
| 1.62 | | b) Overheads, charges and profit on item above | % | R 50 000.00 | | |
| 1.63 | | c) Accredited Training | Prov Sum | | R 25 000.000 | R 25 000.00 |
| 1.64 | | d) Overheads, charges and profit on item above | % | R 25 000.00 | | |
| | PSA 8.6 | PRIME COST ITEMS | | | | |
| 1.67 | | a) Additional quality control test by approved laboratory instructed by the Engineer. (The cost of tests not conforming to standards shall not be included for payment) | P C Sum | 1 | R 50 000.000 | R 50 000.00 |
| 1.68 | | b) Contractor's superintendence and administration of item above | % | R 50 000.00 | | |
| 1.69 | C3.3.7 | c) Community Liason Services | P C Sum | 1 | | R 120 000.00 |
| 1.70 | | d) Project Steering Committee Allowance | P C Sum | 1 | | R 25 000.00 |
| 1.71 | | e) Overheads, charges and profit on items (c) & (d) above | % | R 145 000.00 | | |
| 1.72 | | f) Accomdation for Engineer Rep for duraion of the project | P C Sum | | R 35 000.000 | R 35 000.00 |
| 1.72 | | g) Overheads, charges and profit on item above | % | R 35 000.00 | | |
| | | h) Allow for Specialized Asbestos Sub-Contractor. The work's design must include, methodology, dewatering methodology, construction methodology including detailed construction drawings all work to be approved by Engineer | P C Sum | 1.00 | R150 000.00 | R 150 000.00 |
| | | i) Overheads, charges and profit on item above | % | R 150 000.00 | | |
| | PSA 8.8 | TEMPORARY WORKS | | | | |
| 1.73 | PSA 8.2.2 | Accommodation of traffic for duration of the project(Rate sal include maintance of alternative routes,temporary traffic control facilities) | Month | 12 | | |
| | PSA 8.8.4 | Existing Services | | | | |
| 1.74 | PSA 5.4 | d) Temporary protection, as required in terms of the project specification, of exposed services | Sum | 1 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|------------|--|---------|-------------|--------------|-------------|
| BROUGHT FORWARD | | | | | | |
| | PSA 8.9 | ADDITIONAL SURVEY | | | | |
| 1.75 | | a) As instructed by the Engineer | P C Sum | 1 | R 50 000.000 | R 50 000.00 |
| 1.76 | | b) Overheads, charges and profit on item (a) above | % | R 50 000.00 | | |
| 1.77 | PSPA | Site finishing | Sum | 1 | | |
| | | HEALTH AND SAFETY | | | | |
| | | Compliance with OHS Act and regulations (incl. the construction regulations, 2003) | | | | |
| 1.78 | PSA 8.12.1 | Allow for the cost compiling a Safety Plan as required in the specifications for the Principal Contractor / Contractor (All appointed sub - contractors to provide safety plans) | Sum | 1 | | |
| 1.79 | PSA 8.12.2 | Allow for the cost of the Notification of Construction Work by the Principal Contractor / Contractor | Sum | 1 | | |
| 1.8 | PSA 8.12.3 | Allow for the cost of a copy of OHS Act 85 of 1993 (Book or poster form. To be displayed in the site office) | Sum | 1 | | |
| 1.81 | | Allow for the costs of required Risk Assessments and method statements (Risk Assessments must include all Safe Work Procedures). | Sum | 1 | | |
| 1.82 | | Allow for the costs to compile all Health and Safety Inspection Registers for required tasks. | Sum | 1 | | |
| | | HEALTH AND SAFETY TRAINING | | | | |
| 1.83 | | Allow for the costs of all revelant training on site. | Sum | 1 | | |
| 1.84 | | General Safety Induction Training of all employees on site | Sum | 1 | | |
| 1.85 | | First Aid Training | No. | 2 | | |
| 1.86 | | Fire Fighting Training | No. | 2 | | |
| 1.87 | | Weekly Toolbox Talks (to be conducted by Health and Safety Representative). | Sum | 1 | | |
| 1.88 | | Public Safety near construction site (to be conducted by Health and Safety Representative and CLO). | No. | 1 | | |
| | | ACCREDITED TRAINING OFF SITE | | | | |
| 1.89 | | First Aid Level 1 | No. | 2 | | |
| 1.9 | | Fire Fighting Level 1 | No. | 2 | | |
| 1.91 | | Health and Safety Representative | No. | 4 | | |
| 1.92 | | Medical Certificates of Fitness for mobile plant / Construction vehicle operators | No. | 40 | | |
| 1.93 | | Medical Certificates of Fitness for all Construction workers | No. | 80 | | |
| 1.94 | | Drivers Certificates of Competency for moblie plant / construction vehicle operators | No. | 40 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|---------|--|-------|------|------|--------|
| BROUGHT FORWARD | | | | | | |
| | | <u>SAFETY EQUIPMENT REQUIRED ON SITE</u> | | | | |
| 1.95 | | First Aid Box (fully stocked) | No. | 10 | | |
| 1.96 | | 9.2.9Kg Dc STP Fire Extinguishers | No. | 5 | | |
| 1.97 | | Dust Masks | No. | 200 | | |
| 1.97 | | Safety Goggles | No. | 100 | | |
| 1.98 | | Gloves (leather/PVC) | No. | 100 | | |
| 1.99 | | Hard hats | No. | 100 | | |
| 1.1 | | Barrier tape (Netting) | m | 2000 | | |
| 1.1.01 | | Reflective Vests | No. | 50 | | |
| 1.102 | | Traffic Control Sign Boards | No. | 20 | | |
| 1.103 | | Prohibitive Symbolic Signs (near Diesel / Flammable Fluid Storage). | No. | 10 | | |
| | | <u>Compliance with Construction Environmental Management Programme</u> | | | | |
| 1.104 | | a) Compliance with Environmental Management Plan | Sum | 1 | | |
| 1.105 | | b) Compliance with environmental management specification, for the duration of the Contract. | Month | 14 | | |
| TOTAL SECTION 1 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|--------------------------|---|----------------|------|------|--------|
| | SABS 1200 C | SECTION 2: SITE CLEARANCE | | | | |
| | 8.2 | SCHEDULED ITEMS | | | | |
| 2.1 | 8.2.1 PSC 3.1 PSC 5.1 | <u>Clear and grub</u> | ha | 2.00 | | |
| 2.2 | PSC 8.2.5 | <u>Take down existing fences and re-erect after completion of the works to original state</u> | m | 1000 | | |
| | PSC 8.2.8 | <u>Demolish and remove structures/buildings and cart away unwanted material to spoil at dumpsite (Rate will including but not limited to Break out concrete/brickwork, reinstate, make good edges and dispose of waste)</u> | | | | |
| 2.3 | | a) Informal structures and buildings smaller than 2,5m ² irrespective of type of material | No | 10 | | |
| 2.4 | | b) Buildings/structures larger than 2,5 m ² irrespective of type of material | m ² | 100 | | |
| | | Dismantle and Relocate Pipelines, Electricity Transmission Lines, Cables etc (where necessary) | | | | |
| 2.5 | | a) Electricity Transmission Lines | m | 20 | | |
| 2.6 | | b) Electrical cabling at the existing works area | m | 10 | | |
| 2.7 | | c) Existing sewer pipeline supply at pumpstation sumps | m | 20 | | |
| | | SAW-CUT AND REMOVE, SPOIL OFF-SITE TO MUNICIPAL SOLID WASTE SITE, AND REPLACE WITH NEW, AFTER INSTALLATION OF SEWER GRAVITY NETWORK PIPES | | | | |
| 2.8 | (LI) | Paved Sidewalks / Driveways | m ² | 500 | | |
| 2.9 | (LI) | Concrete Sidewalks / Driveways (15MPa Concrete) | m ² | 250 | | |
| 2.10 | (LI) | Concrete lined stormwater drains / channels (15MPa concrete) | m ² | 150 | | |
| 2.11 | (LI) | Stone-Pitched stormwater channels | m ² | 75 | | |
| | | HYDROJET CLEANING OF BLOCKED SEWER LINES. | | | | |
| 2.12 | | Supply all equipment and operate high pressure pumps and jets to clear blocked pipe sections. | | | | |
| 2.13 | | 1) Supply of all equipment complete to hydroject existing pipelines | Sum | 2 | | |
| 2.14 | | 2) Operate and maintain equipment, including Labour, Fuel and other consumables to clear blocked sewer pipes of various sizes up to 450 mm ø | m | 1500 | | |
| | | VACUUM TANKERS TO PUMP OUT BLOCKED MANHOLES. | | | | |
| 2.15 | | Supply tanker trucks complete with vacuum pumps to empty blocked manholes and cart sewer to the nearest WWTW . | | | | |
| 2.16 | | 1) Supply of tanker trucks | No. | 1 | | |
| 2.17 | | 2) Operate and maintain the tanker including all running costs per manhole emptied. | No. | 50 | | |
| 2.18 | | 3) Supply tempory Gorman-Rupp's Super T Series self-priming centrifugal pumps that will able to pump 36 l/s @ 6m head to pump existing sewer into manhole for duration of the works | Hours | 1584 | | |
| 2.19 | | 4) Supply and install a temporary layflat delivery pipe between a pump and existing main in a valve chamber. | Sum | 1 | | |
| 2.20 | | 5) Supply and fit temporary 250mm sewer pipe plug in incomming sewer line to prevent sewerage to enter a wet well during construction. | Sum | 1.00 | | |
| 2.21 | | 6) Diverting Flow for Upgrades | Sum | 1 | | |
| 2.22 | | 7) Dealing with Flow for connection of new main to existing main | Sum | 1 | | |
| TOTAL SECTION 2 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|----------------|---|----------------|------|------|-----------|
| | SABS 1200 DB | SECTION 2: SITE CLEARANCE | | | | |
| | 8.2 PS 8.8 | SCHEDULED ITEMS | | | | |
| | PSDB8.3.2 PS 3 | Excavation (PS DB 8.3.3.4) | | | | |
| | PSDB8.2.4 | Refer to dwg. no. 34609-133-1. | | | | |
| | PSLB3.4.1 | | | | | |
| | PSDB 8.3.2 | a) Excavate in all materials for trenches, backfill, compact, and dispose of surplus material, for pipes up to 700mm dia. for total trench depth | | | | |
| 3.1 | | 1) Exceeding 0,0m but not exceeding 1,0m | m ³ | 500 | | |
| 3.2 | | 2) Exceeding 1,0m but not exceeding 2,0m | m ³ | 3000 | | |
| 3.3 | | 3) Exceeding 2,0m but not exceeding 3,0m | m ³ | 4500 | | |
| 3.4 | | 4) Exceeding 3,0m but not exceeding 4,0m | m ³ | 2000 | | |
| 3.5 | | 4) Exceeding 4,0m but not exceeding 5,0m | m ³ | 1200 | | |
| | PSDB 3.1 | b) Extra-over items a) above for | | | | |
| 3.6 | | a) Hard rock excavation | m ³ | 1000 | | |
| 3.7 | PLIS | b) Excavation in soft material by labour based methods for trenches shallower than 1,2m and where the total depth of the trench can be classified as excavation in soft material. Compaction by labour based methods is excluded. | m ³ | 1 | | Rate Only |
| 3.8 | | <u>Carefully excavate by hand in Road Reserve, to search and locate, expose, safely barricade, record services (type, size & levels for As-built) and protect existing services as identified on drawings or instructed by Engineer</u> | | | | |
| 3.9 | PSDB 3.3 | c) Excavate and dispose of unsuitable material from trench bottom (provisional) | m ³ | 2000 | | |
| 3.10 | | d) Hand excavation to expose existing services in a careful manner | m ³ | 500 | | |
| 3.11 | 8.3.2 | e) Excavate in all materials for combined sewer and water pipe trenches, backfill, compact and dispose of surplus material (as alternative) | m ³ | 1 | | Rate Only |
| | PSDB 3.1 | f) Extra-over item e) above for | | | | |
| 3.12 | | 1) Hard rock excavation | m ³ | 100 | | |
| 3.13 | PLIS | 2) Excavation in soft material by labour based methods for trenches shallower than 1,3m and where the total depth of the trench can be classified as excavation in soft material. Compaction by labour based methods is excluded. | m ³ | 150 | | |
| | PSDB8.3.3 | Excavation Ancillaries | | | | |
| | 8.3.3.1 | Make up deficiency in backfill material (provisional) | | | | |
| 3.14 | | a) From other necessary excavations on site | m ³ | 1 | | Rate Only |
| 3.15 | | b) With suitable imported material | m ³ | 6000 | | |
| 3.16 | 8.3.3.3 | c) Compaction in road reserves | m ³ | 3000 | | |
| | 8.3.3 | Existing Services that Intersect or Adjoin a Pipe Trench(PROTECTION OF UNDERGROUND SERVICES) | | | | |
| | | a) Services that intersect a trench | | | | |
| 3.17 | | a) Waterconnections | No | 300 | | |
| 3.18 | | b) Water pipe | No | 90 | | |
| 3.19 | | c) Sewer pipe | No | 50 | | |
| 3.20 | | d) HT Underground cable | No | 50 | | |
| 3.21 | | e) HT Overhead cable | No | 50 | | |
| 3.22 | | f) LT Underground cable | No | 50 | | |
| 3.23 | | g) Telkom underground cable | No | 5 | | |
| 3.24 | | h) Telkom overhead cable | No | 5 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|---------------------|--|----------------|---------|------|-----------|
| BROUGHT FORWARD | | | | | | |
| | | b) Services that adjoin a trench | | | | |
| 3.25 | | i) Water pipe | m | 2000 | | |
| 3.26 | | ii) Sewer pipe | m | 500 | | |
| 3.27 | | iii) Stormwater pipe | m | 1000 | | |
| 3.28 | | iv) HT Underground cable | m | 1000 | | |
| 3.29 | | v) HT Overhead cable | m | 500 | | |
| 3.30 | | vi) LT Underground cable | m | 500 | | |
| 3.31 | | vii) LT Overhead cable | m | 500 | | |
| 3.32 | | viii) Telkom underground cable | m | 1 | | Rate Only |
| 3.33 | | ix) Telkom overhead cable | m | 1 | | Rate Only |
| | 8.3.6 | Finishing | | | | |
| | 8.3.6.1 | Reinstate road surfaces and side drains (SAW-CUT AND REMOVE, STOCKPILE ON-SITE TO RE-USE AFTER INSTALATION OF NEW GRAVITY BULK OUTFALL SEWER PIPELINE) | | | | |
| 3.34 | | a) Cut and remove existing road layers works in all coarse up to 350 mm,place in windrow and stockpile on site without limiting access of existing roads (Material must not be contaminated) | m ² | 2250 | | |
| 3.35 | | b) Reinstate existing gravel layers from stockpile material to orginal state and compacted to 98% MOD AASHTO | m ² | 2250 | | |
| | | c) Reinstate surface seal layer to match existing class,type and thickness complete | m ² | 2250 | | |
| 3.36 | | d) Grading of streets after completion | km | 1.50 | | |
| 3.37 | | e) Shaping of side drains | km | 1.50 | | |
| 3.38 | | f) Labour and material to constructed Gravel base from existing stockpiled material chemically stabilized with Ordinary Portland cement @ 2,5% | m ³ | 1000.00 | | |
| 3.39 | | g) Reinstate existing gravel layers from imported G7 material to orginal state and compacted to 98% MOD AASHTO only on instruction of Engineer | m ³ | 500.00 | | |
| | SABS MM 8.4.1 | Reinstate road markings (Provisional) | | | | |
| 3.40 | | a) White lines - unbroken 100mm | m | 1000 | | |
| | SANS 1200 MJ | SEGMENTED PAVING (Remove and store existing brick paving at the on site until working area is ready for reinstatement measure under Site clearance)The items below marked (L) must be done in a labour intensive manner | | | | |
| | 8.2.2 | Construction of Block paving areas complete: | | | | |
| 3.41 | LI PSDB 8.3.6.1 | Carefully lift existing paving by hand for road crossings/along pipeline and stockpile | m ² | 1300 | | |
| 3.42 | LI | Lift existing kerbing combination and stockpile | m | 1100.00 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|---------------------|--|----------------|------|------|--------|
| BROUGHT FORWARD | | | | | | |
| 3.43 | PSMJ | Reinstate paving with stored paving blocks Transport, load, handle and lay existing 60mm fully interlocking paver (herringbone pattern grey or to match existing), on the bedding sand, including cutting units to fit edge restraints, complete | m ² | 1000 | | |
| 3.44 | LI | Reinstate paving with new paving blocks Construction of Paving Complete: 60mm Type S-A Class 30/2.0 non-textured grey interlocking concrete pavers in herringbone or match existing pattern on 20mm sand bed (Rate includes Cutting Units to suit edge restraints and finishing in all block paving voids, and slightly moist spray, on completion. | m ² | 500 | | |
| | SANS 1200 MK | <u>KERBING AND CHANNELING</u> | | | | |
| 8.2.1 | | <u>Concrete kerbing</u> Pre-cast Mountable Kerb (SANS Fig 8B) : | | | | |
| 3.45 | LI | i) Supply and install with stored Curved kerbing complete | m | 50 | | |
| 3.46 | LI | ii) Supply and instal with stored Straight kerbing complete | m | 1000 | | |
| 3.47 | LI | iii) Supply and install New Curved kerbing complete | m | 50 | | |
| 3.48 | LI | iv) Supply and instal new Straight kerbing complete | m | 500 | | |
| | | <u>Underdrains</u> | | | | |
| 3.49 | | 200mm thick, 19mm stone bedding complete with bidum U24 filter fabric (or similar approved) for pipes up to 355mm dia only approved by Engineer (Refer to dwg. no. 34609-133-1, Detail U1) | m | 1000 | | |
| TOTAL SECTION 3 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|------------------------------|---|---|------|------|------|-----------|
| | SABS 1200 LD | SECTION 4: SEWER MAINS - SEWERS | | | | |
| 4.1 | 1200 LD PS 10.6(4) | SEWERS | | | | |
| 4.2 | 8.2.1 | <u>Supply, Lay, Joint, Bed and Test Pipeline: uPVC "Durodrain" or similar approved</u> | | | | |
| | | Solid Wall HD Class 34 | | | | |
| | | a) 110 mm dia | m | 120 | | |
| 4.3 | | b) 160 mm dia | m | 350 | | |
| 4.4 | | c) 200 mm dia. | m | 1500 | | |
| 4.5 | | d) 315 mm dia. | m | 2150 | | |
| 4.4 | | e) 355 mm dia. | m | 400 | | |
| 4.5 | | f) 400 mm dia. | m | 150 | | |
| | 8.2.1 | <u>Supply, Lay, Joint, Bed and Test Pipeline: uPVC "Ultracor" or similar approved (multi-layer, HD class 400)</u> | | | | |
| 4.6 | | a) 160 mm dia | m | 1 | | Rate Only |
| 4.7 | | b) 200 mm dia. | m | 1 | | Rate Only |
| 4.8 | | c) 315 mm dia. | m | 1 | | Rate Only |
| 4.9 | | d) 355 mm dia. | m | 1 | | Rate Only |
| 4.1 | | e) 400 mm dia. | m | 1 | | Rate Only |
| 4.11 | 8.2.2 | a) 45 ° reducing junction from 315 mm to 160mm ø with 45° x PVC bend to receive erf sewer collector | No | 50 | | |
| 4.12 | | b) 45 ° reducing junction from 315 mm to 200 ø with 45° x PVC bend to receive erf sewer collector | No | 50 | | |
| | 8.2.7 | <u>Encasing of pipes in concrete</u> | | | | |
| | | a) For connection between erf sewer collector and sewer mains at depths greater than 1,2 m according to detail on drawing | No | 5 | | |
| | 8.2.8 | <u>Anchor Blocks</u> | | | | |
| 4.13 | | a) As per detail drawing | No | 1 | | Rate Only |
| | 8.2.3 PSLD3.5.2 PSLD3.5.8 PSLD5.6.3 | MANHOLES | | | | |
| | | <u>1000 dia. Complete as per drawing for depth between:</u> | | | | |
| 4.14 | | a) 0,00m and 1,00m | No | 5 | | |
| 4.15 | | b) 1,01m and 1,50m | No | 15 | | |
| 4.16 | | c) 1,51m and 2,00m | No | 20 | | |
| 4.17 | | d) 2,01m and 2,50m | No | 25 | | |
| 4.18 | | e) 2,51m and 3,00m | No | 25 | | |
| 4.19 | | f) 3,01m and 3,50m | No | 15 | | |
| 4.2 | | g) 3.51 and 4.00m | No | 10 | | |
| 4.21 | | h) 4.01m and 4.5 m | No | 5 | | |
| | 8.2.4 | <u>Extra over Item 8.2.3 for Backdrops, etc.</u> | | | | |
| 4.22 | | a) High inlet ramp type complete as per dwg. no. 34609-133-5 | No | 1 | | Rate Only |
| 4.23 | | b) High inlet vertical drop type complete as per dwg. no. 34609-133-5 | No | 5 | | |
| 4.24 | | c) Provisional for upgrading of manhole lids with locking mechanism only instructed by Engineer | No | 50 | | |
| TOTAL CARRIED FORWARD | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|------------|--|------|-----|------|-----------|
| BROUGHT FORWARD | | | | | | |
| | PSLD8.2.11 | a) Connecting to Existing Manhole for depth | | | | |
| 4.25 | | i) 0,00m and 1,00m | No | 10 | | |
| 4.26 | | ii) 1,01m and 1,50m | No | 15 | | |
| 4.27 | | iii) 1,51m and 2,00m | No | 20 | | |
| 4.28 | | iv) 2,01m and 2,50m | No | 15 | | |
| 4.29 | | v) 2,51m and 3,00m | No | 10 | | |
| 4.30 | | vi 3.01 m and 3.5 m | No | 5 | | |
| 4.31 | | vii) 3.51 and 4.00 m | No | 2 | | |
| | | b) Connecting from existing Main Sewer to new Outfall sewer detailed as per drawing including all pipe work (Break into and connect to existing internal sewer pipes inside Private Properties. Connect and repair complete.) | | | | |
| 4.32 | | i) 160mm sewer | No | 50 | | |
| 4.33 | | ii) 200 mm sewer | No | 25 | | |
| 4.34 | | iii) 300 mm sewer | No | 15 | | |
| | | Rodding eye manholes | | | | |
| 4.35 | | Supply and install rodding eye manholes complete including all excavations and backfill as per dwg. no. 34609-133-3 | No | 1 | | Rate Only |
| | | Manhole Repairs: | | | | |
| | | Repair existing manhole with calcium aluminate mortar (Sika MonoTop 4400 MIC or similar approved) for manhole depths between: (as per dwg. no. 34609-133-5, detail R1) | | | | |
| 4.36 | | i) 0,00m and 1,00m | No | 1 | | |
| 4.37 | | ii) 1,01m and 2,00m | No | 10 | | |
| 4.38 | | iv) 2,01m and 3,00m | No | 10 | | |
| 4.39 | | vi 3.01 m and 4.00m | No | 2 | | |
| 4.40 | | Break out existing manhole benching and reconstruct new manhole benching, including all labour, materials , blocking off and dealing with sewer (as per dwg. no. 34609-133-5, detail R8) | No | 80 | | |
| TOTAL SECTION 4 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---------|-----------------|--|----------------|------|------|-----------|
| | SABS 1200 LB | SECTION 5: SEWER MAINS - BEDDING | | | | |
| | PS 10.6(3) | SCHEDULED ITEMS | | | | |
| | | Refer to dwg. no. 34609-133-1 | | | | |
| | 8.2.1 PSLB3.4.1 | <u>Provision of Bedding from Trench Excavation with unlimited free haul distance</u> | | | | |
| | PSLB8.1.6 | | | | | |
| 5.1 | 8.2.1 | a) Selected granular material | m ³ | 1 | | Rate Only |
| 5.2 | PSLB 5.1.3.5 | b) Selected fill material | m ³ | 1 | | Rate Only |
| | 8.2.2 | <u>Supply only of Bedding by Importation</u> | | | | |
| | 8.2.2.3 | <u>From Commercial sources (Provisional)</u> | | | | |
| 5.3 | | a) Selected granular material | m ³ | 750 | | |
| 5.4 | PSLB 5.1.3.5 | b) Selected fill material | m ³ | 2500 | | |
| | 8.2.4 | <u>Encasing of Pipes in Concrete</u> | | | | |
| 5.5 | | a) 0 to 200mm dia. pipes in concrete (Class 15/19 concrete) only on instruction by Engineer | m ³ | 20 | | |
| | PSLB 8.2.6 | <u>Encasing of Pipes in Soilcrete</u> | | | | |
| 5.7 | | a) 0 to 200mm dia. pipes in soilcrete as per drawing (12% cement added per volume) vibrated as for concrete as only on instruction by Engineer | m ³ | 50 | | |

TOTAL SECTION 5 CARRIED FORWARD TO SUMMARY

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|-----------|---|------|-----|------|-----------|
| 6 | PLX | SECTION 6: HORIZONTAL DIRECTIONAL DRILLING TRENCHLESS PIPE INSTALLATION | | | | |
| | | Refer to dwg. no. 34609-133-6 | | | | |
| | PLX 8.1 | <u>SITE ESTABLISHMENT OF DRILLING CONTRACTOR</u> | | | | |
| 6.1 | | Fixed costs to establish "HDD" Plant, equipment, labourers etc in Kgotsong. Cost to incl Construction Mangement, Office Over-head costs, Method Statement, Transport to site, Accommodation and OHS requirements as specified, for full duration of "HDD" processes on site | Sum | 1 | | |
| | PLX 8.2 | <u>TRAFFIC ACCOMMODATION AT "HDD" ROAD SECTIONS</u> | | | | |
| 6.2 | | Traffic Accommodation & Road signs, as well as flagmen, at each "HDD" position, for full duration of "HDD" processes on site. | Sum | 1 | | |
| | PLX 8.3 | <u>SETTING UP AT EACH DRILLING LOCATION</u> | | | | |
| 6.3 | PLX 8.3.1 | Move and Re-establish "HDD" plant at next position. | Sum | - | | Rate only |
| | PLX 8.3.2 | <u>Excavation and Preparation of Launch and Reception Pits</u> | No | 2 | | |
| 6.4 | | Wayleave Application to all authorities | Sum | 1 | | |
| 6.5 | | Scanning of Road/Railway Crossing for External Services | Sum | - | | Rate only |
| 6.6 | PLX 8.4 | Drilling of Pipes in Soft material, reaming and installation of x1 Class 10 HDPE PE100 pipe for pipe diameter, inclusive of BUTT WELDING each section of pipe. | | | | |
| 6.6.1 | | a) 200mm dia HDPE pipe | m | 200 | | |
| 6.6.2 | | b) 250mm dia HDPE pipe | m | 100 | | |
| 6.6.3 | | c) 315mm dia HDPE pipe | m | 50 | | |
| 6.6.4 | | d) 355 mm dia HDPE pipe | m | 50 | | |
| 6.7 | | EXTRA OVER : ITEM 6.6 : DRILLING IN ROCK | m | - | | Rate only |
| | | Standing Time | | | | |
| 6.8 | | Standing Time for Drilling Team & Equipment | Hour | 27 | | |
| TOTAL SECTION 6 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------------------|--|------|-----|------|-----------|
| 7 | PLX SASTT-TS-TT2 | SECTION 7: PIPE CRACKING / BURSTING Refer to dwg. no. 34609-133-6 | | | | |
| | PLX 8.1 | <u>SITE ESTABLISHMENT OF PIPE CRACKING CONTRACTOR</u> | | | | |
| 7.1 | | Fixed costs to establish Pipe Bursting / Cracking Plant, equipment, labourers etc in Kgotsong. Cost to include Construction Mangement, Office Over-head costs, Method Statement, Transport to site, Accommodation and OHS requirements as specified, for full duration of the Pipe Bursting / Cracking processes on site | Sum | 1 | | |
| | PLX 8.2 | <u>TRAFFIC ACCOMMODATION</u> | | | | |
| 7.2 | | Traffic Accommodation & Road signs, as well as flagmen, at each Pipe Bursting / Cracking position, for full duration of Pipe Bursting / Cracking processes on site | Sum | 1 | | |
| | PLX 8.3 | <u>SETTING UP AT EACH PIPE CRACKING LOCATION</u> | | | | |
| 7.3 | PLX 8.3.1 | Move and Re-establish Pipe Bursting / Cracking plant at next position. | No | 4 | | |
| 7.4 | | Wayleave Application to all Authorities | Sum | - | | Rate only |
| | SASTT-TS-TT2 1.1 | Supply, handle, lay and test through pipe cracking including supply of equipment: HDPE PE 100 PN10 (SDR 17) | | | | |
| 7.5 | | a) 200mm dia | m | 40 | | |
| 7.6 | | a) 250mm dia | m | 40 | | |
| 7.7 | | b) 315mm dia | m | 40 | | |
| 7.8 | | c) 355 mm dia | m | 40 | | |
| | SASTT-TS-TT2 1.3 | Construct pit for insertion / pulling of replacement pipe between manholes. Rate shall include all materials and labour required: | | | | |
| 7.9 | | a) Depth to invert up to 2,0m | No. | 2 | | |
| 7.10 | | b) Depth to invert from 2,01m to 3,0m | No. | 4 | | |
| 7.11 | | c) Depth to invert from 3,01m to 4,0m | No. | 2 | | |
| 7.12 | SASTT-TS-TT2 1.2 | Allow for reconnecting house connections. Rate shall include excavation, backfilling, labour and all fittings required | No. | 8 | | |
| 7.13 | | Point repairs to sewers of all diameters before pipe cracking. Rate shall include all materials and labour required | No. | 8 | | |
| | | CCTV Surveys | | | | |
| 7.14 | | CCTV camera survey of pipelines after upgrade works, of all diameters, including any cleaning required | m | 160 | | |
| TOTAL SECTION 17 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|---------|--|----------------|------|------|-----------|
| 8 | | SECTION 8: 1700 CLEARING AND GRUBBING | | | | |
| 8.1 | | Clearing and grubbing | ha | 0.50 | | |
| | | Removal and grubbing of large trees and tree stumps: | | | | |
| 8.2 | | (a) Girth exceeding 1 m up to and including 2 m | | | | |
| 8.3 | | Re-clearing of surfaces (on written instruction of the Engineer Only) | ha | 0.25 | | |
| 8.4 | | Cleaning and grubbing at inlets and outlets of hydraulic structures | m ² | 20 | | |
| | | Cleaning out of Hydraulic structures | | | | |
| 8.5 | | a) Pipes with internal diameter up to and including 750mm | m ³ | 1 | | Rate only |
| 8.6 | | c) Box culverts up to and including 1.5m vertical | m ³ | 10 | | |
| TOTAL SECTION 8 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---|---------|--|----------------|-----|------|-----------|
| 9 | | SECTION 9: 2100 DRAINS | | | | |
| | | Excavation for open drains: | | | | |
| | | a) Excavating soft material situated within the following depth ranges below the surface level | | | | |
| 9.1 | | (i) 0 m up to 1,5 m (LI) | m ³ | 10 | | |
| 9.2 | | b) Extra over subitem 21.01(a) for excavation | m ³ | 1 | | Rate only |
| 9.3 | | Clearing and shaping existing open drains (LI) | m ³ | 20 | | |
| TOTAL SECTION 9 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------|---|----------------|-----|------|-----------|
| 10 | | SECTION 10: 2200 PREFABRICATED CULVERTS | | | | |
| | | Excavation: | | | | |
| | | a)Excavating soft material situated within the following depth ranges below the surface level | | | | |
| 10.1 | | (i) 0 m up to 1,5 m | m ³ | 150 | | |
| 10.2 | | (ii) Exceeding 1,5 m and up to 3,0 m | m ³ | 30 | | |
| 10.3 | | b)Extra over subitem 22.01(a) for excavation in hard material, irrespective of depth | m ³ | 1 | | Rate only |
| | | Backfilling: | | | | |
| 10.4 | | (a)Using the excavated material | m ³ | 1 | | Rate only |
| 10.5 | | (b)Using imported selected material | m ³ | 15 | | |
| 10.6 | | (c)Extra over subitems 22.02(a) and (b) for soil cement backfilling containing 3% cement* | m ³ | 3 | | |
| | | Concrete pipe culverts: | | | | |
| 10.7 | | (a)On class A bedding: | | | | |
| 10.8 | | i) 450mm dia 100D | m | 25 | | |
| | | Cast in situ concrete and formwork: | | | | |
| | | (a)In class A bedding, screeds and the encasing for pipes, including formwork: | | | | |
| 10.9 | | (i) Grade 30 concrete | m ³ | 2 | | |
| | | (b) In floor slabs for portal or rectangular culverts, including formwork, joints and class U2 surface finish: | | | | |
| 10.10 | | (i) Grade 30 concrete | m ³ | 1 | | |
| | | Steel reinforcement: | | | | |
| 10.11 | | (a) Mild steel bars | t | 1 | | Rate only |
| 10.12 | | (b) High-tensile steel bars | t | 1 | | Rate only |
| 10.13 | | (c) Welded steel fabric | kg | 20 | | |
| | | Manholes, catchpits, precast inlet and outlet structures complete: | | | | |
| 10.14 | | Manholes from engineering bricks (1.5m x 1.5m x 1.5m from NFX Burnt Clay Masonry complying with SANS 227 on 150mm Class 20/19 concrete) | number | 1 | | Rate only |
| | | Catchpits: | | | | |
| 10.15 | | from precast concrete | number | 1 | | Rate only |
| | | Brickwork: | | | | |
| 10.16 | | (b) 230 mm thick | m ² | 10 | | |
| 10.17 | | Benching | m ² | 10 | | |
| TOTAL SECTION 10 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------|---|----------------|-----|------|-----------|
| 11 | | SECTION 11: 2300 KERBS | | | | |
| | | Concrete kerbing: | | | | |
| 11.1 | | a) Prefabricated mountable kerb, SANS 927 Fig 8c, on straight sections (as per detail drawings) (LI) | m | 100 | | |
| 11.2 | | b) Prefabricated mountable kerb, SANS 927 Fig 8c, on curved sections (as per detail drawings) (LI) | m | 25 | | |
| 11.3 | | c) Prefabricated barrier kerb, SANS 927 Fig 3, on straight sections (as per detail drawings) (LI) | m | 100 | | Rate only |
| 11.4 | | d) Prefabricated barrier kerb, SANS 927 Fig 3, on curved sections (as per detail drawings) (LI) | m | 25 | | Rate only |
| 11.5 | | e) Prefabricated edge restraint, SANS 927 Fig 10, on straight sections (as per detail drawings) (LI) | m | 100 | | |
| 11.6 | | f) Prefabricated edge restraint, SANS 927 Fig 10, on curved sections (as per detail drawings) (LI) | m | 25 | | |
| 11.7 | | g) Prefabricated mountable kerb, SANS 927 Fig 14, on straight sections (as per detail drawings) (LI) | m | 100 | | |
| 11.8 | | h) Prefabricated mountable kerb, SANS 927 Fig 14, on curved sections (as per detail drawings) (LI) | m | 25 | | |
| 11.9 | | i) Cast in situ concrete Class 30/19 edge beam (as per detail drawings) (LI) | m | 100 | | |
| | | Inlet, outlet, transition and similar structures (as indicated by the Engineer on site) | | | | |
| | | (a) Concrete: | | | | |
| 11.10 | | Class 25 / 19 concrete (LI) | m ³ | 2 | | |
| | | Trimming of excavations for concrete-lined open channels/drains: | | | | |
| | | Concrete lined open channels/drains:(Cast in situ concrete channels and concrete stormwater structures as shown on drawings). | | | | |
| 11.11 | | a) Cast in situ Class 25 /19 concrete Channel (1x0.1 Stormwater trapezoidal-Channel) (LI) | m ³ | 5 | | |
| 11.12 | | b) Cast in situ Class 30 /19 concrete road crossing channel (3x0.1 Stormwater trapezoidal-Channel) (LI) | m ³ | 10 | | |
| 11.13 | | c) Cast in situ Class 15 /19 blinding concrete (LI) | m ³ | 1 | | Rate only |
| 11.14 | | Class U2 surface finish to cast in situ concrete in trapezoidal and v-drains (LI) | m ² | 100 | | |
| | | Formwork to cast in situ concrete lining for open drains (class F2 surface finish): | | | | |
| 11.15 | | a) To sides with formwork on external face (LI) | m ² | 15 | | |
| 11.16 | | b)To ends of slabs (LI) | m ² | 2 | | |
| | | Steel reinforcement: | | | | |
| | | Welded steel fabric as shown on drawings | | | | |
| 11.17 | | a) Mesh Ref 193 to stormwater channel | m ² | 100 | | |
| TOTAL SECTION 11 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|---------|---------|---|----------------|-----|------|-----------|
| 12 | | SECTION 12: 3300 MASS EARTHWORKS | | | | |
| | | Cut and borrow to fill from existing road layers | | | | |
| | | a) Material in compacted layer thicknesses of 200 mm and less: | | | | |
| 12.1 | | i) Compacted to 93% of modified AASHTO density (only on approval of the Engineer) | m ³ | 5 | | |
| 12.2 | | ii) Compacted to 95% of modified AASHTO density | m ³ | 1 | | Rate only |
| | | Cut to spoil, including all haul. Material obtained from: | | | | |
| 12.3 | | a) Soft excavation | m ³ | 150 | | |
| 12.4 | | b) Hard excavation | m ³ | 1 | | Rate only |
| 12.5 | | c) Boulder excavation class A | m ³ | 1 | | Rate only |
| | | Removal of unsuitable material, including all haul: | | | | |
| | | In layer thicknesses of 200 mm and less: | | | | |
| 12.6 | | a) Stable material | m ³ | 1 | | Rate only |
| 12.7 | | b) Unstable material (only on approval of the Engineer) | m ³ | 25 | | |
| 12.8 | | Material temporarily removed and placed in a windrow | m ³ | 1 | | Rate only |
| | | In situ treatment of roadbed: | | | | |
| 12.9 | | a) In situ treatment by ripping | m ³ | 150 | | |

TOTAL SECTION 12 CARRIED FORWARD TO SUMMARY

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------|---|------|-----|------|-----------|
| 13 | | SECTION 13: 3400 PAVEMENT LAYERS OF GRAVEL MATERIAL | | | | |
| | | Pavement layers constructed from gravel obtained from existing pavement layers: | | | | |
| | | Gravel selected layer compacted to: | | | | |
| 13.1 | | a) 93% of modified AASHTO density for a compacted layer thickness of 150 mm (only on approval of the Engineer) | m³ | 150 | | |
| | | Gravel sub-base (unstabilized gravel) compacted to: | | | | |
| 13.2 | | b) 95% of modified AASHTO density for a compacted layer thickness of 150 mm | m³ | 1 | | Rate only |
| | | Pavement layers constructed from gravel obtained from commercial sources or approved sources provided by the contractor, including all haul: | | | | |
| | | Gravel selected layer from G9 material (unstabilized gravel) compacted to: | | | | |
| 13.3 | | a) 93% of modified AASHTO density for a compacted layer thickness of 150 mm | m³ | 150 | | |
| | | Gravel subbase from G7 material (unstabilized gravel) compacted to: | | | | |
| 13.4 | | b) 95% of modified AASHTO density for a compacted layer thickness of 150 mm | m³ | 125 | | |
| | | Gravel base from G5 material chemically stabilized to C4 and compacted to: | | | | |
| 13.5 | | c) 97% of modified AASHTO density for a compacted layer thickness of 150mm | m³ | 140 | | |
| TOTAL SECTION 13 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------|---|----------------|-----|------|-----------|
| 14 | | SECTION 14: 3500 STABILIZATION | | | | |
| | | Chemical stabilization extra over unstabilized | | | | |
| 14.1 | | a) Gravel subbase, 150mm thick | m ³ | 1 | | Rate only |
| 14.2 | | b) Gravel base, 150mm thick | m ³ | 165 | | |
| | | Chemical stabilizing agent: | | | | |
| 14.3 | | a) Ordinary Portland cement @ 2,5% | t | 9 | | |
| TOTAL SECTION 14 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------|--|----------------|-----|------|--------|
| 15 | | SECTION 15: 5100 PITCHING | | | | |
| | | Stone pitching | | | | |
| 15.1 | | a) Grouted stone pitching on a concrete bed (75 - 150mm thick Class 25/19) (LI) | m ² | 100 | | |
| TOTAL SECTION 15 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|---------|--|----------------|-----|------|--------|
| 16 | | SECTION 16: 7300 CONCRETE BLOCK PAVING | | | | |
| | | Concrete block paving: | | | | |
| 16.1 | | a) 60mm concrete segmeted paving blocks (SANS 1058) 40/2.6 Type S-A laid on a 20mm thick sand bedding vibrated to locked up condition (LI) | m ² | 600 | | |
| 16.2 | | b) 80mm concrete segmeted paving blocks (SANS 1058) 40/2.6 Type S-A laid on a 20mm thick sand bedding vibrated to locked up condition (LI) | m ² | 600 | | |
| 16.3 | | Cast in situ concrete edge and intermediate beams (in positions approved by the Engineer) | m ³ | 2 | | |
| TOTAL SECTION 16 CARRIED FORWARD TO SUMMARY | | | | | | |

| ITEM NO | PAYMENT | DESCRIPTION | UNIT | QTY | Rate | Amount |
|--|-----------|---|--------|-------------|------------|------------|
| 17 | | SECTION 17: 8100 TEST MATERIALS AND WORKMANSHIP | | | | |
| | | Compaction - and Concrete Tests requested by the Engineer: | | | | |
| 17.1 | 81.02 (a) | a) Cost of testing | PC Sum | 1 | R30 000.00 | R30 000.00 |
| 17.2 | | b) Handling cost and profit in respect of subitem 81.02 (a) above | % | R 30 000.00 | | |
| TOTAL SECTION 17 CARRIED FORWARD TO SUMMARY | | | | | | |

SUMMARY OF SECTIONS

| Description | Amount |
|--|--------|
| SECTION 1: PRELIMINARY AND GENERAL | |
| SECTION 2: SITE CLEARANCE | |
| SECTION 2: SITE CLEARANCE | |
| SECTION 4: SEWER MAINS - SEWERS | |
| SECTION 5: SEWER MAINS - BEDDING | |
| SECTION 6: HORIZONTAL DIRECTIONAL DRILLING | |
| SECTION 7: PIPE CRACKING / BURSTING | |
| SECTION 8: 1700 CLEARING AND GRUBBING | |
| SECTION 9: 2100 DRAINS | |
| SECTION 10: 2200 PREFABRICATED CULVERTS | |
| SECTION 11: 2300 KERBS | |
| SECTION 12: 3300 MASS EARTHWORKS | |
| SECTION 13: 3400 PAVEMENT LAYERS | |
| SECTION 14: 3500 STABILIZATION | |
| SECTION 15: 5100 PITCHING | |
| SECTION 16: 7300 CONCRETE BLOCK PAVING | |
| SECTION 17: 8100 TEST MATERIALS | |
| | |
| SUB-TOTAL (1) (TOTAL OF SECTIONS) | |

| | |
|---|--|
| ADD: CONTINGENCIES (10%) (Allow the sum of 10% (ten percent) of the above Sub-total 1 for Contingencies to be spent as the Engineer may direct and to be deducted in whole or in part if not required.) | |
| SUB-TOTAL 2 (SUB TOTAL 1 + 10% CONTINGENCIES) | |
| ADD: PRICE ESCALATION ALLOWANCE OF 10 % TO SUB TOTAL 1 | |
| SUB-TOTAL 3 (SUB-TOTAL 2 + 10% CPA) | |
| ADD: VAT (15%) SUB-TOTAL 3 | |
| TOTAL FOR SUMMARY CARRIED FORWARD TO COVER PAGE | |