

HESSEQUA MUNICIPALITY

HES-TECH 23/2526

CONSTRUCTION OF A NEW 1ML RESERVOIR IN JONGENSFONTEIN

PART C3: SCOPE OF WORKS

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PART C3.1: DESCRIPTION OF WORKS

C3.1 DESCRIPTION OF WORKS

C3.1.1 Overview of the Works

C3.1.1.1 SCOPE OF WORKS: CONSTRUCTION OF A NEW 1ML RESERVOIR IN JONGENSFONTEIN

1. Scope of Work

The scope of work includes the construction of a new 1ML reinforced concrete reservoir and the installation of a pipeline connection to the existing pipeline.

2. Location

Description	Coordinates	
	Latitude	Longitude
Jongensfontein Reservoirs	-34.423146	21.331655



3. Work Description

The works to be constructed under this contract include, but is not limited to, that which is shown on the drawings and include the following main activities:

3.1 Reservoir

The reservoir construction activities include, but are not limited to, the following:

- Site clearance and stockpiling of topsoil.
- Excavation to the required foundation level for the 1ML reservoir as indicated in the drawings.

- Bulk excavation, including cutting to spoil and disposal of material at an approved spoil site.
- Placement of blinding concrete where specified.
- Construction of reinforced concrete structures, including as indicated in the drawings:
 - Reservoir floor slab
 - Reservoir walls
 - Roof slab
 - Access structures, manholes, and chambers
- Reinforcement:
 - Reinforcing steel shall be high-yield deformed bars in accordance with SANS 920.
 - Reinforcement shall be correctly spaced, tied, and provided with the required cover, as indicated in the drawings.
 - All reinforcement shall be inspected and approved prior to concrete placement.
- Construction of inlet, outlet, scour, and overflow structures integrated with the reservoir.
- Protection of existing services during excavation and construction activities.

3.2 Pipework

The pipework construction activities include, but are not limited to, the following:

- Excavation for pipelines, including trenching to the required depth and width, as indicated in the drawings.
- Excavation for connections to existing pipes, including careful exposure of existing services.
- Construction of:
 - Valve chambers
 - Manholes
 - Scour structures
 - Air valve structures (where required)
- Backfilling and compaction around completed pipelines and structures according to SABS 1200 standards.
- Supply and installation of interconnecting pipework, including:
 - Pipes (specified materials)
 - Bends, tees, reducers, and all specials
 - Valves and valve fittings
 - Flange adaptors and couplings
- Construction of manholes and valve chambers in reinforced concrete.
- Protection of existing pipes and services during trenching, installation, and backfilling operations.
- Testing of installed pipelines, including pressure testing according to SANS requirements.

4. General:

- Submit As-built on handover.
- Reinstatement of surface.

** All construction to follow standards outlined in SABS 1200.*

CONTRACT MANAGEMENT AND REPORTING

- The municipality will be responsible for the contract administration and the management of project finances. The delivery of project outputs will be managed by the municipality, in line with the agreed Project Implementation Plan.

GENERAL CONDITIONS:

- a) All materials must be applied strictly in accordance with the relevant technical specifications and application manual of the product.
- b) The contractor must remove all rubbish from the site.
- c) The successful contractor must also supply his own temporary storage room/container for keeping and locking up tools, building materials and accessories during such time it takes to complete the project, if needed.
- d) The quotation must include all related expenses, i.e. all new material, transport of material, labour and the removing of all refuse.
- e) A written guarantee for a period of 1 year, to the value of 10% of the contract value, must be submitted within 14 days of inception meeting. Should any defects occur due to poor workmanship under this quotation the contractor must repair the defects at his or her own cost to the satisfaction of the Municipality. The 1-year period commence from the date of completion.
- f) Access to the construction area could be done via the existing roads. The Contractor shall make use of temporary haul roads, or where not practically possible, program his work in such a manner that the haulage of materials shall be restricted to that required for the particular section of street. No additional payment shall be made for the use of temporary haul roads and all relevant costs shall be deemed to be covered by the appropriate rates. The Contractor must note that no additional payment will be made for the construction of temporary access roads to the construction site, borrow-areas or to the spoil sites.
- g) If the Contractor does make use of existing streets for the hauling of materials to or from the site, he shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary, within two (2) days after such spillage has occurred. No additional payment will be made for the clearance of spillage and all relevant costs will be deemed to be covered under the relevant items.
- h) It is the Contractor's responsibility to supply and deliver all materials that complies with the minimum standards as well as for the building and maintaining of access roads to the works on site, haul areas or dumping sites. No additional payment will be applicable to the above-mentioned other than the relevant items in the schedule of quantities.
- i) The construction site is situated in a built-up area, therefore the Contractor shall ensure the least possible disruption of movement of the public during construction.
- j) Construction methods must be such a nature that no property or life is endangered. The Employer accepts no responsibility for work that is done outside the site boundaries without the Engineer's approval. The Contractor himself is responsible for liaison and arrangements with the Local Authority in connection with the finalisation and approval of the construction program.
- k) The Contractor himself is responsible for liaison and the necessary arrangements with private owners, the relevant road authorities, Telkom and the Hessequa Municipality regarding the position of existing services in respect of the finalisation and approval of the works program.
- l) The Contractor himself is responsible for liaison with house owners in respect of programming of construction through private erven and the crossing of driveways to erven. No additional payment will be made in this regard and it shall be deemed to be covered by the relevant items.
- m) Sufficient photos of existing structures, walls and areas that have to be crossed must be taken by the Contractor and handed over to the Engineer before such operations commence. No payment will be made in this regard and it shall be deemed to be covered in the preliminary and general items.
- n) The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in this contract. Any claim for extension of time shall be evaluated against these programmes. Only programmes accepted and approved by the Engineer shall be applicable.
- o) The Contractor shall make his own arrangement for any water or power he may require. Any extension of time due to delays resulting from these facilities will not be granted.
- p) No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements for housing his employees or transporting them to and from the site. The Contractor is in all respects responsible for the housing and transporting of his employees, and for the arrangement thereof, and no extension of time due to any delays resulting from this, will be granted.
- q) Both the "Factories, Machinery and Building Work Act (Act 22 of 1941) and the "Machinery and Occupational Safety Act (Act 6 of 1983)" must, wherever they appear in the SANS 1200 standardised specifications, be substituted by the "Occupational Health and Safety Act (Act 85 of

- 1993)".
- r) Progressive and systematic finishing and tidying will form an essential part of this contract. Under no circumstances shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate unnecessarily and in the event of this occurring the Engineer shall have the right to withhold payment for as long as necessary in respect of the relevant works in the area(s) concerned.
 - s) The Contractor is in all respect responsible for the handling of storm water from higher laying areas, adjacent to the works, and for the handling of possible sub-surface water. No separate payment shall be made for this as all costs related thereto shall be deemed to be included.
 - t) Although not bound in nor issued with this document, the following standardised specifications shall form part of the contract and, notwithstanding the provisions of sub clause 2.2 of SANS 1200 A, the editions specified below shall apply:
SANS 1200 A - 1986 GENERAL
SANS 1200 AB - 1986 ENGINEER'S OFFICE
SABS 1200 G 1986 CONCRETE (STRUCTURAL)
 - u) Disposal of solid waste other than to a municipal dump will not be allowed.
 - v) No polluted effluent or other liquid of any nature shall be discharged or allowed to run into any water course, in contravention of the National Water Act, 1998 (Act No. 36 of 1998). The handling and disposal of these liquids shall not allow these liquids to enter the ground water system. All such liquids shall be transported off site and disposed of in a manner agreed with the Engineer.
 - w) No fires may be lit except if approved by the Engineer and in properly prepared facilities approved by the Engineer. Fires shall be kept small and appropriate to their function. The Contractor shall ensure that the fire risk on and near the site is reduced to a minimum and shall take immediate and effectible steps to extinguish any fire that may break out. All costs relating to damage by fire caused by the Contractor will be for the Contractor's cost.
 - x) The Contractor shall take care when dealing with cement, especially near ground and surface water courses. Any, even slight, contamination of water courses by cementitious material is prohibited. The use of cement must be controlled with respect to the above and surplus concrete must be removed from site.
 - y) All scarred areas, borrow and spoil areas, cut and fill slopes, all temporary haul and access roads and tracks and any other areas where the vegetation has been removed and or damaged, shall be reinstated to restore the area as near as possible to its original state. Such reinstatement shall include the removal of refuse, debris and construction infrastructure and materials, the scarifying of all hardened surfaces, the replacement and spreading of unused material, the correction of drainage deficiencies to provide free drainage, the flattening of cut and fill slopes and the shaping and trimming of surfaces all as necessary or as directed by the Engineer.
 - z) The Contractor shall ensure that his workmen are properly instructed and carry out the requirements of these environmental clauses. The Contractor will be held liable for all unauthorized damage caused by him or any of his workmen.
 - aa) The Contractor's attention is drawn to Clause 4.1 of SABS 1200 A which is applicable.

Local employment:

- All temporary and unskilled labour must be rendered by unemployed local labourers from the Hessequa area (within the Town and Ward of the project site location, unless otherwise stated).
- The Service provider must at least pay the municipal minimum daily wage as prescribed in the approved council policy (R241.84 per day).
- Project will be executed in such a manner to target temporary and unskilled labour that must be rendered by persons from within the site area of the execution of the work.

C 3.2.3 Existing Services

To be determined on site by the contractor

C 3.2.3.1 Known services

The positions of existing services, insofar as they are known, are shown on the drawings. Items have been allowed in the Schedule of Quantities for dealing with and protecting services. The Contractor shall take whatever precautions are required to protect these services from damage during the period of the contract. The Contractor must take every effort to locate such services which may be damaged as a result of construction.

C3.2.3.2 Treatment of existing services

The treatment of existing services, i.e. their termination, diversion or continued use, either temporarily or permanently, is shown on the relevant drawings. Any services encountered on site which are not on the drawings, must be pointed out to the Engineer. The Engineer will issue further instructions with regard to the treatment of these services.

C3.2.3.3 Use of detection equipment for the location of underground services

Specialist equipment for the detection of underground services shall only be used or hired on instruction of the Engineer or where specified in PSD Earthworks in section C3.4.1.2.

C3.2.3.3 Damage to services

If existing services are not shown on the drawings but the existence thereof can be reasonably expected, the Contractor shall, in conjunction with all relevant authorities, determine the exact depth and location of such services before the commencement of construction. After locating the exact position of services, whether indicated on the drawings or not, such services shall be deemed to be known services and the Contractor shall be liable for all costs and subsequent costs arising from the damage thereof as a result of the Contractor's activities. These services must also be indicated on the "Record" drawings.

C3.2.3.4 Reinstatement of services and structure damaged during construction

The requirements and reinstatement procedures for the notification and repair of damage to services, penalties applicable to the damage of services, etc. will be discussed at the first meeting (site hand-over).

C3.2.4 SITE ESTABLISHMENT

C3.2.4.1 Service and facilities provided by the employer

(i) Source of Water Supply

The Contractor may make application to the Municipality's Water Division for a clean water supply point but shall bear all the costs for the installation of such supply point. Water used by the Contractor from the Employer's mains will be charged for at the tariffs ruling at the time of use.

The Contractor shall make himself thoroughly acquainted with the regulations relating to the use of water and shall take adequate measures to prevent the wastage of water.

The Employer accepts no responsibility for the shortage of water due to any cause whatsoever, nor additional costs incurred by the Contractor as a result of such shortage.

The Contractor shall take note that no direct payment will be made for any costs incurred neither for the provision of a water supply point nor for the cost of water drawn. Payment for the aforementioned shall be deemed to be covered by the rates and prices tendered and paid for the various items of work included under the Contract.

(ii) Source of Power Supply

The Contractor is to make his own arrangements with the Electricity Department for a supply of electricity, if required, and shall pay establishment and consumption costs at the tariffs ruling at the time.

(iii) Location of Camp and Materials storage area

The camp site and storage area will be indicated to tenderers at the site inspection for the contract.

The Contractor shall confine his camp and storage of materials to the areas designated. On completion of the construction works the surface of the areas utilised shall be re-instated.

C3.2.4.2 Facilities provided by the contractor

(i) Temporary Offices

An office for the Engineer is not required. Site meetings will be held in the **Contractor's site office**.

(ii) Sanitary Facilities

The Contractor shall supply chemical toilets for use by his workmen. The number of toilets shall be based on one toilet per fifteen personnel on site.

Under no circumstances will the Contractor's staff be allowed to use public toilet facilities.

(iii) Telephone Facilities

A site telephone will not be required by the Engineer, but the time-related tendered rates

shall provide for prepaid calls by the Engineer or his Representative as scheduled.

C3.2.4.3 Storage and laboratory facilities

No storage and laboratory facilities are required on site.

C3.2.4.4 Other facilities and services

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements for housing his employees or transporting them to and from the site. The Contractor is in all respects responsible for the housing and transporting of his employees, and for the arrangement thereof, and no extension of time due to any delays resulting from this will be granted.

C3.2.4.5 Notice boards

The notice board required shall be as detailed in the tender document.

C3.2.5 PERMITS AND WAY LEAVES

The Contractor shall obtain the necessary permits and way leaves from the relevant authorities before any construction work may commence. The Employer will provide the necessary drawings for the application of the permits and way leaves. The Contractor must allow in his preliminary and general costs to obtain the permits and way leaves, as well as in his construction programme.

C3.2.6 ALTERATIONS, ADDITIONS, EXTENSIONS AND MODIFICATIONS TO EXISTING WORKS

The Contractor must familiarise himself of the position of all existing services and structures and report any discrepancies or services not shown on the drawing to the Engineer.

The Contractor must verify the list of benchmarks shown on the drawings for the setting out of the works and confirm their correctness.

C3.2.7 INSPECTION OF ADJOINING PROPERTIES

If necessary, the adjacent properties or existing services within the site must be inspected with representatives of the relevant authorities before commencing with the works. The Contractor must also take photographs of all existing services, streets and structures in the residential area. Special care should be given to private property.

C3.2.8 SURVEY CONTROL AND SETTING OUT OF THE WORKS

Refer to PS A 5.1.1.

C3.2.9 FEATURES REQUIRING SPECIAL ATTENTION

C3.2.9.1 Safety Regulations

Both the "Factories, Machinery and Building Work Act (Act 22 of 1941) and the "Machinery and Occupational Safety Act (Act 6 of 1983)" must, wherever they appear in the SABS 1200 standardised specifications, be substituted by the "Occupational Health and Safety Act (Act 85 of 1993)"

The Contractor shall apply suitable proven methods for construction complying with the

OHS Act so that his activities will not constitute a hazard to his work force, the public or any adjacent property. All excavations shall be suitable safeguarded and barricaded especially during the night-time, weekends or holidays and any other day of inactivity by the Contractor. The Contractor shall ensure that excavations are shored or otherwise made safe.

The camp and construction site will be locked after hours to ensure safety of passers-by. No additional payment will be made to the Contractor for complying with these requirements.

C3.2.9.2 "Record" Drawings

As the work progresses, the Contractor shall keep full records of all amendments to and deviations from the drawings as issued to the Contractor at the start of the contract. This information must be submitted monthly by the Contractor with his payment certificate, to the Engineer. The true positions, invert levels and ground levels of all services shall be indicated on the drawings, for which purpose the Contractor shall receive a separate complete set of drawings from the Engineer, at no cost.

The completion certificate shall only be issued after the Engineer has received a properly completed set of "record" drawings from the Contractor. No separate payment shall be made for this service as all costs related thereto shall be deemed to be included in the related items.

C3.2.9.3 Finishing and tidying

Progressive and systematic finishing and tidying will form an essential part of this contract. Under no circumstances shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate unnecessarily and in the event of this occurring the Engineer shall have the right to withhold payment for as long as necessary in respect of the relevant works in the area(s) concerned.

Failure to adhere to the beforementioned will result in your tender being declared non-responsive.

DECLARATION,

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED ABOVE IS CORRECT. I ACCEPT THAT THE MUNICIPALITY MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

AUTHORISED SIGNATURE:

NAME:

CAPACITY: DATE: