

C.45 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C2.3 SUMMARY OF BILL OF QUANTITIES

C2.3.1 Summary

C2.4 CALCULATION OF TENDER SUM

Note : Tender sum is the value of the offered total of the prices exclusive of VAT, contingencies, CPA and special materials but including contractual variations.



C.46 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

SUB-TOTAL BROUGHT FORWARD FROM SUMMARY	OF SCHEDULE OF QUANTITIES (A)
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nad contigenoids & on (30	
	SUB-TOTAL (B)
	000 101AL(D)
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	(D= (VAT + C))
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Authorised Signatory:	
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	Municipal Official Stamp
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C.47 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

PART C3: SCOPE OF WORK

C3.1	DESCRIPTION OF WORKS
C3.2	ENGINEERING
C3.3	PROCUREMENT
C3.4	CONSTRUCTION SPECIFICATIONS

C.48 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.1 DESCRIPTION OF WORKS

C3.1.1 EMPLOYER'S OBJECTIVES

The employer's main objective is to upgrade the existing gravel roads to asphalt surface of approximately 2.5 km and to construct a bridge crossing from Mathousands to Maraganeng.

OBJECTIVES DURING CONSTRUCTION ARE TO PROVIDE BLACK EMPOWERED ECONOMIC enterprise contractors with a portion of the work, work opportunities to the local communities, provide training to local and other labourers and to execute and complete the work with a high degree of safety, sensitivity to the environment and quality.

C3.1.2 OVERVIEW AND LOCATION OF WORKS

General Description

The project entails the appointment of a contractor for CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSAND TO MARAGANENG.

• Employer's Objective

The existing access road is gravel and predominantly utilised for commuting and interlinking the villages. The condition of this road is below standard, eroded and not safe for use, and they require upgrading and improved stormwater management.

Overview of the works

The work to be carried out under this contract includes the earthworks, concrete works and construction of stormwater infrastructure such as the bridge and concrete side drain. The site for the proposed work is confined within the property boundaries, as such, the contractor should allow access in and out of the properties during construction.

C3.1.3 EXTENT OF WORKS

Below Are The Major Works On The Project:

- Contractor's Establishment on Site
- Compliance with EMP and OHS Act Requirements
- Provisions of Temporary Workforce (ABE)
- Accommodation of Traffic
- Relocation of:
 - Water Supply infrastructure,
 - Electric Poles, and
 - Existing Fences and boundary walls
- Clearing and Grubbing
- Construction of Road Layer Works
- Installation of Kerbing

C.49 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- Construction of Storm Water Channels,
- Road Surfacing,
- Installation of Traffic Calming Measures
- Installation of Guardrails
- Construction of Stone Pitching and Gabions
- Road Markings
- Finishing of Road Reserve on Completion of the Project,
- Construction of Bridge
- De-establishment of Site

The description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this contract.

C3.1.4 LOCATION OF THE WORKS

The project is located in the area of Glen Cowie and Ga-Moloi near Jane Furse town within Makhuduthamaga Local Municipality (MLM). Makhuduthamaga Local Municipality in turn falls within the jurisdiction of Sekhukhune District Municipality in the Limpopo Province.

The area has an average altitude of 1450 m asl, and its approximate co-ordinates are as follows:

- 24° 49' 43.61" S
- 29° 48' 36.39" E

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C.50 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG



Figure 1- Locality Map (Google, 2023)

C3.1.5 TEMPORARY WORKS

All temporary works required by the contractor to perform the required construction, shall be removed after completion of construction.

The Contractor shall, as relevant:

- a) provide temporary drainage works, temporary pumps and other equipment as might be necessary for the protection, draining and dewatering of the works; and
- b) construct and maintain haulage, temporary access and construction roads, subject to the approval of the Employer, and permit the Employer, other Contractors, statutory bodies or any other person who might require legitimate access to or through the site for the purpose of executing legitimate business, free and unhindered usage of such roads.
- c) temporary water connections, Contractor's offices, storage sheds, latrines, barricading of Works shall be located in an approved position and subject to the approval of all authorities concerned.
- d) Safety and security of the Contractors' temporary works shall be at the Contractors' discretion, but always in accordance with stipulated Occupational Health and Safety requirements.
- e) The camp shall be adequately guarded during or outside working hours.

C.51 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- f) include the works required to locate, verify and protect existing services within the works area;
- g) be such to ensure no or limited interruption to vehicular and pedestrian traffic; and
- h) be such that existing stormwater flow shall not be impeded during survey and construction activities.

Further the Contractor shall note that no stockpiling of materials, plant, excavated material or any other construction related infrastructure shall be allowed in locations that may interfere with the operations of the Employer and the public in general.

C3.1.6 CONSTRUCTION PROGRAMME

In order to ensure a clear understanding, at the inception of the Contract, of the programming and documentation format requirements, the Contractor shall appoint a project programmer/ planner for liaison during the Contract. The Contractor shall for the Contract Period provide and regularly update (maximum monthly) a Contract Programme. The programme shall at minimum contain:

- a) Time Scale (minimum):
 - i) Days, where the period does not exceed three months. Weeks, where the project period exceeds three months.
 - ii) Months, where the period does not exceed one year.
 - iii) Years, where the project period exceeds one year.
- b) Tasks: Where phases or stages are anticipated, this shall be the highest level of division and all tasks related to the successful accomplishment of that phase of the area shall be grouped. Resources allocation and task dependency shall be indicated.
- c) Start and Finish Dates: All tasks shall have specific start and finish dates.
- d) Critical Path: All tasks forming the programme line that will establish any delays in the overall Contract Period shall be clearly indicated and an indication of their sensitivity characteristics shall be provided.
- e) Progress Tracking: The Contractor shall be required to periodically indicate progress per task graphically and on a percentage basis.
- f) Non-working Time: All South African public holidays, weekends and the local traditional annual builder's break shall be incorporated in the programme.

No deviation from the approved sequence of construction shall be accepted without prior written approval.

The programme shall not be in the form of a bar chart only, but shall show clearly the anticipated quantities of work to be performed each month, together with the manner in which the listed plant is to be used, as well as the anticipated earnings for the various sections of work.

C.52 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

NOTA BENE: A Contract programme shall be submitted to the Employer's Agent no later than 14 days after Contract Commencement Date.

The Contractor shall provide the Employer's Agent with a method statement indicating the manner and sequence in which he intends to construct the works, for each work area, with the program. In the method statement the Contractor must address at least the following items:

- a) sequence of the works for the relevant works area;
- b) target dates for the tasks identified in sequence of the works for the relevant works area;
- c) materials requirements;
- d) construction Plant to be used;
- e) services affecting construction; and
- f) any factors that could affect construction progress after commencement.

The method statement must be approved by the Employer's Agent before commencement of construction. In order to minimize the impact on traffic, pedestrians and business the Contractor will be required to segment the works in such a manner that no portion of the works is more than one day ahead of the following position. These segments of the works shall be clearly defined in the Contractor's method statement for each work area.

If, during the progress of the work, the quantities of work performed per month fall below those shown on the program or if the sequence of operations is altered, or if the program is deviated from in any other way, the Contractor shall, within one week after being notified by the Employer's Agent, submit a revised program.

If the program is to be revised by reason of the Contractor falling behind his program, he shall produce a revised program showing the modifications to the original program necessary to ensure completion of the Works or any part thereof within the time for completion. Any proposal to increase the rate of work must be accompanied by positive steps to increase production by providing more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the program or revised program shall be sufficient reason for the Employer to take steps as provided for in the Condition of Contracts.

The approval by the Employer's Agent of any program shall have no contractual significance other than that the Employer's Agent would be satisfied if the work is carried out in accordance to such program and that the Contractor undertakes to carry

C.53 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

out the work in accordance with the program. It shall not limit the right of the Employer's Agent to instruct the Contractor to vary the program should circumstances make this necessary.

C3.1.7 GENERAL INFORMATION

C3.1.7.1 Drawings

The reduced drawings contained in Annexure C5.2 that form part of the Tender document shall be used for Tender purposes only. Further drawings are to be provided on an on-going basis by the Employer's Agent.

Any information in the possession of the contractor, which the Employer's Agent requires to complete the as-built drawings, shall be supplied to the Employer's Agent before a certificate of completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Employer's Agent. The Employer's Agent will supply all figured dimensions omitted from the drawings.

C3.1.7.2 Power, Water Supply and Other Services

The contractor shall make his own arrangements concerning the supply of electrical power and all other services. No direct payment will be made for the provision of electrical and other services. The cost of providing these services will be deemed to be included in the rates and amounts Tendered for the various items of work for which these services are required.

C3.1.7.3 Contractor's Camp Site and Security

The contractor shall make his own arrangements regarding the establishment of a camp site and housing for his construction personnel and all regulations stipulated by the local authority shall be adhered to.

It is anticipated that the contractor's choice of a camp site will be influenced by the availability of telephone and electrical connections as well as the supply of potable water in consultation with the councillors and the municipality.

Provision is made in these specifications for the erection of a security fence around the site offices. The contractor shall be responsible for the security of his personnel and constructional plant on and around the site of the works and for the security of his camp, and the employer will consider no claims in this regard.

C3.1.8 ADDITIONAL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

C3.1.8.1 Construction Before Traffic Accommodate

The contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the

MAKHUDUTHAMAGA LOGAL MUNICIPALITY

C.54 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

requirements of this document and the South African Road Traffic Signs Manual.

C3.1.8.2 Construction in Confined Areas

In certain areas, the contractor may work in confined areas with limited working space. The method of construction in these confined areas depends on the contractor's construction plant. However, the contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, irrespective of the method used to achieve these cross-sections and dimensions, and that the rates and amounts Tendered will be deemed to include full compensation for any special equipment or construction methods or for any difficulty encountered in working in confined areas and narrow widths, and at or around obstructions, and that no extra payment will be made nor will any claim for payment be considered on account of these difficulties.

C3.1.8.3 Existing Services

Several services exist along the road reserve. The exact location of some of services is not known and the contractor will at all times be required to contact the relevant service owners. The contractor is required to exercise extreme caution in his construction activities until the exact position of all services in the vicinity has been established. It is expected that in some cases final decisions will have to be made on site as to the protection of services.

C.55 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.2 ENGINEERING

C3.2.1 DESIGN SERVICES

- (a) The Employer is responsible for:
 - The detail design of the permanent works as reflected in the Contract Documents, unless otherwise stated;
 - Approval of designs by the Contractor.
- (b) The Contractor is responsible for:
 - Detail design of the temporary Works (if applicable) and their compatibility with the permanent Works.
 - Supply of all design drawings and/or calculations and/or literature and/or any other information required by the Employer's Agent to review and approve the Contractor's design.
- (c) All information in possession of the Contractor, required by the Employer's Agent and/or the Employer's Agent's Representative to complete the asbuilt/record drawings, must be submitted to the Employer's Agent's Representative before a Certificate of Completion will be issued.

C3.2.2 EMPLOYER'S DESIGN

The Employer will be responsible for the design of the work to be executed under this project, except where it is explicitly stated in the Project Specification that another party is responsible for any portion of the design.

C3.2.3 DRAWINGS

The drawings prepared by the Employer for the permanent works comprise the following:

- Civil drawings
- Structural drawings

The drawings listed above are the contract drawings. The drawings issued to tenderers as part of the tender documents must be regarded as provisional and preliminary for the tenderers benefit to generally assess the scope of work. These drawings, together with such other drawings as may from time to time be issued by the Employer's Agent to the contractor, form part of the Contract Document. The work shall be carried out in accordance with the latest available revision of the drawings approved for construction.

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Employer's Agent. The Employer's Agent will, on the request of the Contractor in accordance with the provisions of the Conditions of



C.56 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Contract, provide such dimensions as may have been omitted from the Drawings.

All information in possession of the Contractor, required by the Employer's Agent and/or the Employer's Agent's Representative to complete the as-built/ record drawings, must be submitted to the Employer's Agent's Representative before a Certificate of Completion will be issued.

The Drawings prepared by the Employer for the permanent Works are listed and bound into this volume. The drawings bound into the tender document are for tendering purposes only. Construction drawings will be issued to the successful tenderer/s upon the site handover.

MAKHUDUTHAMAGA DOCAL MINICIPALITY

C.57 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.3 PROCUREMENT

C3.3.1 REQUIREMENTS

The contractor shall be required to adopt labour based techniques through the full spectrum of the works with the proviso that the Clients specific objectives regarding TIME & Quality are in no way compromised. **Maximisation of employment shall be of the essence on this contract.**

Together with their tenders, all Tenderers are required to submit a comprehensive implementation plan clearly stating the labour content & number of jobs that shall be created.

The employment of labour shall be reflected in a programme in sufficient detail to enable the Employer's Agent to monitor & compare it with the implementation plan.

The contractor shall be required to submit employment data on a monthly basis to the Employer's Agent.

C3.3.2 PARTICIPATION AND ADVANCEMENT OF START-UP, SMALL AND MICRO ENTERPRISES

The Makhuduthamaga Local Municipality has identified job creation and access to procurement opportunities by Start-ups, Small and Micro enterprises (SMMEs) as an essential requirement towards building an economically viable Area. In this regard the following definitions are applicable

"Start-up Enterprises" means an enterprise that has been in existence and operating for less than two years.

"Small Enterprises" means an enterprise that has a CIDB grading designation of 1 or 2

"Micro Enterprises" means an enterprise that has a CIDB grading designation of

"Locally based SMMEs" means enterprises that have their operational base in the ward in which the project is to be executed or, alternatively, the members of the enterprise are resident in the particular ward. Should suitable locally based SMME contractors as defined above not be available in the particular ward, then they shall be sourced from adjacent wards.

It is a condition of this tender that the successful contractor is required to subcontract a minimum value of work as follows:

- If it is established that the SMMEs are sufficiently resourced to execute the proposed works as a complete package the Contractor may conclude full subcontract agreements with locally based SMMEs to a minimum value of 10%.
- If it is established that the SMMEs are insufficiently resourced to execute the proposed works as a complete package the Contractor may conclude

C.58 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

contracts on a management/labour only basis in which event a minimum of 5% of the value of the works is to be sub-contracted. The onus is on the Contractor to prove to the Employer that no fully fledged SMMEs are active in the area of the project. In this case, the contractor must submit a proposal with his tender on how he intends to advance the growth of the SMME's involved in this contract.

The form of contract to be used with SMMEs is the SAFCEC General Conditions of Sub-Contract for Civil Works. The Contract Data must record the specific requirements in respect of penalties, retention and payment. With regard to the latter, the Contractor is to allow for fortnightly certificates from the SMMEs and for payment to the SMMEs to be effected within 7 days of certification.

In order to achieve the goals of this policy and to ensure that the SMMEs are treated fairly and given every opportunity to advance their business whilst delivering a successful project, the Contractor is to note the following and provide for any cost that may be associated therewith.

- If appropriate, the SMME bill of quantities is to provide for market related P&G
 items in order that the SMME may be compensated for any unforeseen delays
 or events that impact on his ability to complete his works.
- The Contractor will be expected to have clearly specified the programme dates
 to the SMME sub-contractor and these dates are to be included in the contract
 of agreement between the two parties. The Contractor is to monitor the SMME
 sub-contractor's progress against the programme and hold progress meetings
 with the SMME sub-contractor where minutes are to be kept and signed off by
 both parties.
- The Contractor is to assess the skills of the SMME sub-contractor and provide the relevant support and training where it is necessary in order for the SMME sub-contractor to complete the works to programme, budget and specification. The Contractor will be expected to provide on-site training to the SMME subcontractor that will ensure that the SMME sub-contractor's staff is suitably trained to execute the works and that they receive sufficient relevant experience on the project.
- The Contractor is responsible for safety compliance on the project and will assist the SMME sub-contractor in all aspects to achieve safety compliance, that will include:
 - a) Assisting the SMME sub-contractor with developing their safety files, legal appointments, etc
 - b) Assisting the SMME sub-contractor with achieving safety on site.

C.59 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- c) Having toolbox talks with the SMME sub-contractor employees on a daily basis.
- d) Providing all safety equipment and signage.
- e) Providing safety training where necessary.
- The Contractor is to provide all the necessary equipment for the timeous monitoring and the checking of the quality of works as carried out by the SMME sub-contractor. The Contractor will be expected to monitor the SMME sub-contractor's works for quality compliance and provide all the necessary support to the SMME sub-contractor in order to achieve quality requirements. The Contractor is to ensure that if the SMME sub-contractors' quality of works does not achieve specification the Contractor will assist the SMME sub-contractor to achieve specification and not allow the works to continue until the quality requirements are achieved.
- The Contractor is to generate monthly reports for the Makhuduthamaga Local Municipality that includes the following:
 - a) SMME sub-contractor resources on the site, i.e., supervisors, labour, plant tools and equipment
 - b) SMME sub-contractor progress of works on site.
 - c) SMME sub-contractor quality control on site.
 - d) SMME sub-contractor expenditure on the project versus target expenditure.
 - e) Copies of minutes of the SMME sub-contractor and Contractor progress meetings.
 - f) Concerns and improvements to be made.

The Tenderers are to price the works to achieve full compliance with the above requirements. Failure of the Contractor to achieve these requirements may result in the municipality enforcing compliance by appointing 3rd parties if necessary to assist and deducting all reasonable costs for achieving compliance from money due to the Contractor.



C.60 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4 CONSTRUCTION SPECIFICATIONS

C.61 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4.1 PART A: GENERAL

A1 MISCELLANEOUS

The Construction Specifications form an integral part of the contract documents and supplement the Standard Specifications.

In the event of any discrepancy with a part or parts of the Construction Specifications, the Standard Specifications, the bill of quantities or the drawings, the Construction Specifications shall take precedence.

The Standard Specifications (Part B) which form part of this contract have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

A2 PLANT AND MATERIAL SUPPLIED BY EMPLOYER

None

A3 CONSTRUCTION EQUIPMENT SUPPLIED BY EMPLOYER

None

A4 SITE ESTABLISHMENT

No specific campsite has been earmarked for this contract and it will be up to the Contractor to make the necessary arrangements for a suitable campsite.

The Contractor is however required to obtain approval of his choice of campsite from the Employer's Agent.

Once the Contractor has chosen a site, he will be required to make all necessary arrangements for water, telephone and power connections with the relevant service owners in the area.

A5 SITE USAGE: ADDITIONAL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

a) The Contractor shall be responsible for the construction of the deviations for the accommodation of traffic. In all cases shall the existing number of traffic lanes and possible movements of traffic be retained.

The Contractor's tendered rates for the relevant items in the schedule of quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment following on inconvenience caused by or as a result of the modus operandi to be followed will be considered.

C.62 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- b) The traveling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.
- c) Failure to maintain road signs, warning signs or flicker lights, etc. in a good condition shall constitute ample reason for the Employer's Agent to stop the works until the road signs, etc. have been repaired to his satisfaction.
- d) The Contractor may not commence constructional activities before adequate provision has been made for accommodating traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.
- e) The Contractor shall submit proposals in connection with directional signs to the Employer's Agent for approval.
- f) The Contractor may not construct any deviations without the written approval from the Employer's Agent.

A6 PERMITS AND WAYLEAVES

The Employer's Agent shall obtain wayleave conditions from the services agencies listed below and issue a package of such conditions to the Contractor to obtain the main wayleave from Sekhukhune District Municipality before construction commences.

- Eskom and
- Telkom
- Neotel
- MTN
- Vodacom
- DFA

A7 ALTERATIONS, ADDITIONS, EXTENSIONS AND MODIFICATION TO EXISTING WORKS

The Contractor must satisfy himself that the dimensions accuracy, alignment, levels and setting out of the existing road, structures or components thereof are compatible with the proposed Works and must notify the Employer's Agent where this is not the case.

C.63 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

A8 INSPECTION OF AJOINING PROPERTIES

The Contractor together with the Employer's Agent must inspect all adjacent properties for defects, cracks etc. before commencing with the works that may have a potential to damage surrounding buildings and properties. Notes and photographs must be taken to record any existing defects prior to the commencement of the works.

A9 WATER FOR CONSTRUCTION PURPOSES, POWER SUPPLY AND OTHER SERVICES

The Contractor shall make all his own arrangements concerning the supply of construction water, electrical power and all other services. No direct payment will be made for the provision of such services. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

A10 SURVEY CONTROL AND SETTING OUT OF THE WORKS

The Contractor must check all survey control beacons indicated on the drawings before commencing with the works and must notify the Employer's Agent of any discrepancy.

A11 CONSTRUCTION IN CONFINED AREAS

- a) It may be necessary for the Contractor to work within confined areas. Apart from the case of the exceptions described in this subclause, no additional payment will be made for work done in restricted areas. In certain places the width of the fill material and pavement layers may reduce to as little as zero and the working space may be confined. The method of construction in these confined areas will depend largely on the Contractor's constructional plant. However, the Contractor shall note that measurement and payment will be in accordance with the specified cross-sections and dimensions irrespective of the method used to achieve these cross-sections and dimensions that the tendered rates and amounts shall be deemed to include full compensation for any special equipment and construction methods or for any difficulty encountered in working in confined areas and narrow widths, and at/or around obstructions, and that no extra payment will be made nor will any claim for additional payment be considered in such cases.
- b) Additional compensation for work in confined areas will be paid in the following cases, provided that provision has been made expressly therefore in the Construction Specifications and in the Bill of Quantities:
 - i). For fill in restricted areas at structures as specified in clause 6108.

C.64 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

ii). For portions of road rehabilitation work for which provision has been made in the relevant clauses and payment items of series the Special Provisions. (Additional compensation for work in confined areas.)

A12 TRAINING

Technical skills training shall be provided by the Contractor to all local labour involved in the Contract to enhance their development, and to assist in the empowerment of the local communities. Part G of the Construction Specifications deals specifically with matters regarding training, and a payment item for that is included in Clause B 1231 of Part B2 of the Construction Specifications.

A13 USE OF LOCAL RESOURCES

The major objective of this Contract is the optimum use of local resources as required by the Department of Labour's Special Public Works Programme (Government Notice No R63 of 25 January 2002)

One of the methods to be adopted to achieve this objective is through the implementation of labour-optimising construction methods.

A14 LABOUR-OPTIMISING CONSTRUCTION ACTIVITIES

a) General

The portions of the Works listed in Subclause (b) below shall, unless otherwise instructed by the Employer's Agent, be constructed under this Contract using labour-optimising construction methods only.

In respect of those portions of the Works which are not listed in Subclause (b), the construction methods adopted and plant used shall be at the discretion of the Contractor, provided always that the construction methods adopted and plant used by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

Operations to be executed using labour-optimising construction methods.

The following portions of the Works are suitable to be executed using labouroptimising construction methods:

- (i) Clearing and grubbing the site and borrow areas.
- (ii) Removing and grubbing large trees and tree stumps.

C.65 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (iii) Clearing and grubbing at inlets and outlets of hydraulic structures.
- (iv) Cleaning hydraulic structures.
- (v) Excavations for all open drains, culverts, inlet and outlet structures, concrete structures, fence posts, road sign posts and guardrail posts.
- (vi) Constructing catch water banks and mitre banks.
- (vii) Constructing culvert inlet and outlet structures as well as cast in situ slabs, including all masonry work and minor precast work. All concrete for such work shall be mixed by hand or by hand-driven mixing machines.
- (viii) Backfilling and compaction of all excavations.
- (ix) Removal of oversize material.
- (x) Removing existing concrete and masonry work, irrespective of class and type.
- (xi) Stone pitching and erosion protection.
- (xii) Finishing off borrow areas in specified areas allocated for labour-intensive construction.
- (xiii) Finishing off cut and fill slopes.
- (xiv) Cleaning of formwork
- (xv) Formwork stripping
- (xvi) Concrete paving
- (xvii) Rubbing down of concrete surface
- (xviii) On-site handling of materials (e.g., formwork, re-bar, concrete, etc.)
- (xix) Finishing the approaches and approaches reserve.
- (xx) Treatment of old roads and temporary diversions

A15 RESTRICTIONS ON THE USE OF PERSONNEL IN THE PERMANENT EMPLOYMENT OF THE CONTRACTOR

- a) The Contractor shall limit the use on the Works of his permanently employed personnel to that of key personnel only (as defined in Part F of the Construction Specifications) and shall, subject to the further provisions of the following parts of the Construction Specifications
 - i) Part F Provision of the temporary workforce,
 - ii) Part G Provision of structured training,

C.66 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Execute and complete the Works using a temporary workforce employed directly by the Contractor and/or by Subcontractors.

- b) The Employer's Agent may at his discretion, upon receipt of a written and fully motivated application from the Contractor and where he deems the circumstances to warrant, authorize in writing that the Contractor may use in the execution of the Works, workers not being his key personnel but who are in his permanent employ. Without limiting the generality of application of this subclause, circumstances which may be considered by the Employer's Agent to warrant the authorization of the use of the Contractor's permanent employees not being key personnel, include:
 - i) The unavailability of sufficient numbers of temporary workers and/or Subcontractors to execute the Works, provided always that the Contractor has proven that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient numbers of temporary workers and Subcontractors and has exhausted all reasonable recruitment options.
 - ii) The unavailability within the temporary worker pool and/or Subcontractor sources available to the Contractor in terms of the Contract, of sufficient of the required knowledge and skills necessary for the execution of the Works or specific portions thereof, in cases where the time for completion allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of training as contemplated in this Contract.
 - iii) Any other circumstances which the Employer's Agent may deem as constituting a warrant.

C.67 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4.2 PART B: MATTERS RELATING TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE WORKS

B1. STANDARD SPECIFICATIONS

The Standard General and Technical Specifications for Roadwork's shall be the COLTO - Standard Specifications for Road and Bridge Works for State Road Authorities (1998).

The Standard Specifications forming part of this contract have been written to cover all phases of work usually encountered on road and bridge contracts and may therefore cover items of work not encountered in this particular contract.

The Contractor is responsible for ensuring that he is thoroughly familiar with all the amendments and corrections before submitting his tender.

B2. CONSTRUCTION SPECIFICATIONS REFERRING TO THE STANDARD SPECIFICATIONS AND ADDITIONAL SPECIFICATIONS

The Standard Specifications provide, in certain clauses, for a choice to be specified in the Construction Specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this Contract are contained in this part of the Construction Specifications. It also contains some additional specifications required for this particular contract.

The number of each clause and each payment item in this part of the Construction Specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the Standard Specifications. The number of a new clause or a new payment item, which does not form part of a clause or a payment item in the Standard Specifications and is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the Standard Specifications.

C.68 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B3. SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS

B1202 SERVICES

Add the following:

Before any work commences, the Contractor shall contact all private owners or public authorities controlling services so that they may, either protect, move or relocate any service as required, or confirm that all such work has been completed.

Payment will not be made for any inconvenience caused to the Contractor in regard to any services crossing the site or any authority working on any such services, nor will any delays caused by such workings be accepted as a basis for claiming an extension of time for completing the works.

All known existing services and those services which require relocation and protection, are shown on the drawings. The Contractor's attention is drawn to the fact that this schedule is based on information supplied by others, and the accuracy and completeness of this information has not been confirmed. The Contractor will therefore be required to proceed with extreme caution in order to avoid damage to existing services.

In general the Employer's Agent may call upon the Contractor to re-excavate trenches previously dug and backfilled by others where in the opinion of the Employer's Agent such work is necessary to ensure the stability of any other works over such trenches. This in no way relieves the Contractor of his responsibility in terms of the works.

C.69 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B1204 : PROGRAMME OF WORK

Insert the following before the first paragraph:

A network-based programme in accordance with the precedence method shall be provided by the Contractor showing the various activities in such details as may be required by the Employer's Agent. The programme shall be updated monthly in accordance with the progress made by the Contractor.

Failure to comply with these requirements will entitle the Employer's Agent to apply a programme based on his own assumptions for the purpose of evaluating claims for extension of time for completion of the works, or for additional compensation.

B1206: SETTING OUT OF WORK AND PROTECTION OF BEACONS

Add the following after the third paragraph of clause 1206:

Permanent beacons and reference pegs will be provided.

Add the following to clause 1206:

The Contractor shall supply and maintain for the use of the Employer's Agent and his representative during the course of the contract, an approved automatic level, a 5 meter telescopic levelling staff, a 50 meter steel tape and ranging rods, all in good condition and adjustment. A single minute tachometer in good condition and adjustment shall be made available to the Employer's Agent or his representative on request. Whenever called upon to do so, he shall provide two staff and instrument men for the purpose of assisting the Employer's Agent or his representative.

The Contractor shall provide, free of charge, sufficient labour to the Employer's Agent or his representative for measuring, leveling, testing or other work of a short duration which may be necessary during the course of the contract. At least one literate employee shall be available on request.

B1207: NOTICES, SIGNS AND ADVERTISEMENTS

Add the following:

Details of the signs required in terms of the Standard Specifications are shown overleaf.

B12.09 : PAYMENT

MAKHUDUTHAMAGA 100AL MINICIPALITY

C.70 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

b) Rates to be inclusive

Add the following to the first paragraph:

VAT shall be excluded from the tendered rates and sums and provided for as a lump sum in the summary of the Bill of Quantities.

Add the following sub-clause:

g) Payment certificates

With reference to subclause 49 (1) of the General Conditions of Contract, the Engineer's Certificate will be issued only after receipt by him of a draft certificate prepared by the Contractor at his own expense in the form prescribed by the Employer's Agent. The cost of duplicating and delivering copies of the Engineer's Certificate to the Contractor, the Employer's Agent and the Employer shall be borne by the Contractor. The Employer's Agent and the Employer shall require four sets of A4-sized paper copies in total.

B1215 : EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

Add the following:

If during the time for completion of the works or any extension thereof abnormal rainfall or wet conditions shall occur then an extension of time in accordance with clause 42 of the GCC hereof shall be granted by the Employer calculated in accordance with the formula given below for each calendar month or part thereof.

$$V = (Nw - Nn) + ((Rw - Rn)/X)$$

V	Extension of time in calendar days in respect of the calendar month under consideration.
Nw	Actual number of days during the calendar month on which a rainfall of Y mm or more has been recorded.
Nn	Average number of days, as derived from existing rainfall records, on which a rainfall of Y mm or more has been recorded for the calendar month.
Rw	Actual rainfall in mm recorded for the calendar month under consideration.
Rn	Average rainfall in mm for the calendar month as derived from existing rainfall records.

For purposes of the contract Nn, Rn, X and Y shall have those values assigned to them in the Contract Data and/or the Specification.

MAKHUDUTHAMAGA DOCAL MINNERALITY

C.71 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month to be calculated using pro rata values of Nn and Rn.

This formula does not take account of flood damage that could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw-Nn) shall be considered to represent a fair allowance for variations from the average number of days during which rainfall exceeds Y mm. The factor (Rw-Rn)/X shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed Y mm but wet conditions prevented or disrupted work.

(i) The following average rainfall figures are applicable:

Y = 10 mm/24 hour day

X = 20 mm

Nn= Actual number of days during the calendar months in which a rainfall of

more than Y mm has been received

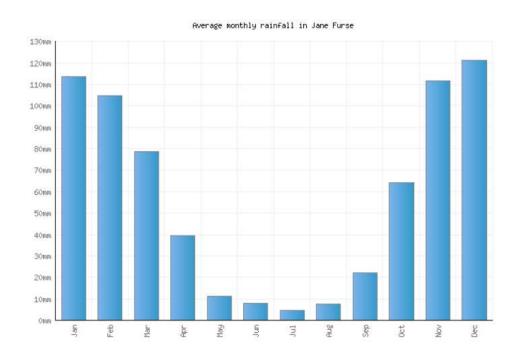
Rn= Average monthly rainfall

C.72 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Average rainfall & rainy days

The graph below shows the average rainfall and number of rainy days per month.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
mm	114	105	79	39	11	8	5	8	22	64	112	121
Rainy days	11	9	9	6	2	2	1	2	3	8	12	12

The Contractor shall be permitted to take his own rainfall measurements on site subject to the Employer's Agent's approval, but access to the measuring gauge(s) shall be under the Employer's Agent's control. The Contractor is to provide and install all the necessary equipment for accurately measuring the rainfall as well as to provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost.

B1219 : WATER

Add the following to clause 1219:

Water shall be provided by the local municipality. Rates and points are to be arranged between themselves and the Contractor, but the position of the Employer (or his agent) as a supplier of water shall be identical to that of other suppliers and quite separate from his position as Employer under the contract. As in the case

C.73 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

of a supplier, a failure on the part of the Employer (or his agent) to supply water will not relieve the Contractor of any of his obligations under the Contract, nor in respect of any such failure shall the Contractor have any claim under the Contract against the Employer.

B1230 : SPOIL AREA

The Contractor shall make his own arrangements for the provision of a suitable place off the site for the disposal of material obtained from excavations, demolition, clearing and grubbing, the demolition of boundary walls and rock cuttings. The rates in the Bill of Quantities are to include all costs or fees payable to cover the disposal at the dumping site.

B2230 : TRAINING

Structured training shall be provided to temporary personnel involved in the contract in accordance with the provisions set out in Part G. The selection of the candidates will be approved by the Employer's Agent, the representatives of the local communities and the Employer's Representative in the area, subject to the required entrance levels. All training courses must be offered through approved accredited training organizations.

The Contractor shall provide the following for the training:

- a) Electrified venue with sufficient lighting and furniture
- b) All necessary stationary, consumables and study material
- c) Transport to and from the training venue
- d) Wages for candidates attending technical skills training during working hours
- e) Payment to approved training organizations for the provision of training.

B1231 : MEASUREMENT AND PAYMENT

C.74 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

	SKII	is trainingProvisional Sum
e)	Cor	ntractor's handling costs, profit and all other
	cha	rges in respect of Subitems B12.01(a):
	i)	Training skillspercentage (%)

Payment under subitems B12.01 (c) shall be the amounts actually paid to the training institutions and shall be made in accordance with the provisions of the General Conditions of Contract.

The lump sum tendered for subitem B12.01 (c) shall include full compensation for the provision of a suitable training venue, for all necessary lighting, furniture, stationary, consumables and study material, and for transportation of the workers to and from the training venue. Payment of the lump sum will be made in two instalments as follows:

- (i) The first instalment, 75% of the lump sum, will be paid after the Contractor has met all his obligations regarding the provision of the training venue as specified.
- (ii) The second and final instalment, 25% of the lump sum, will be paid after the Contractor has met all his obligations regarding the provision of all the training programmes specified in the document.

Payment under subitem B12.01(d) shall be the actual sum paid to workers undergoing skills training. The Contractor will not be reimbursed directly for his administrative costs, which will be deemed to be included in the rates tendered for item B13.01.

The percentages tendered for subitem B12.01 (e) shall be the percentages of the amounts actually reimbursed to the Contractor under subitems B12.01 (a) and (b) and shall be in full and final compensation in respect of the Contractor's handling costs, profit, mentoring, record keeping, reporting and all other charges in connection with providing the services."

Item Unit

B12.02 Exposing existing services by hand in all classes of material

cubic meter (m³)

The unit of measurement shall be the cubic meter of material excavated within the lengths and widths authorized by the Employer's Agent and the depth required to

C.75 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

expose the service. Excavation in excess of the authorized dimensions shall not be measured for payment.

The tendered rates shall include full compensation for all excavation, backfilling, compacting to 90 % of modified AASHTO density, disposing of surplus excavated material, keeping the excavations safe, dealing with any surface or subsurface water, taking special care to ensure that services are not damaged in any way and any other operation necessary for completing the work.

No distinction will be made between hard and soft material nor will distinction be made between the various types of services to be exposed or the depths to which excavations are taken.

NOTE:

The Contractor shall supply adequate supervision for the labourers when excavating to expose services. Any damage to a service caused by the Contractor shall be repaired at his expense to the satisfaction of the owner of the service and the Employer's Agent.

Item Unit

B12.03 Allow for work to services not covered by scheduled items Provisional Sum

The Contractor shall be paid for the reconstruction of manholes, removal of redundant services, or any other work to protect or relocate services not itemized elsewhere, as "Extra Work" in terms of clause 36 of the General Conditions of Contract.

ltem Unit

B12.04 Relocation of electrical services:

- a) Excavation
 - i) of trenches in soft material up to 2 m below ground level

cubic metre (m³)

ii) Hand excavation in all classes of material

cubic metre (m³)

- b) Extra over items B12.05 (a)(1) for excavation in hard material
- c) Backfilling of trenches and compaction to 90 % of modified AASHTO density using :

MAKHUDUTHAMAGA ODEAL MINICIPALITY

C.76 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- i) The excavated material cubic metre (m³)
- ii) Imported selected material (free haul 1,0 km) cubic metre (m³)
- d) Overhaul on excavated material carted to spoil cubic kilometre and backfill material for haul in excess of 1,0 km (m³-km)

The unit of measurement shall be the cubic metre of material excavated or backfilled as directed by the Employer's Agent for electrical cables.

The tendered rates shall include full compensation for all operations necessary for completing the work as specified.

The excavation and backfill of material will, for the purpose of measurement and payment, be classified as specified under clause 2105.

Subitem B12.05 (d) shall be the cubic metre of overhaul material hauled in excess of 1,0 km multiplied by the overhaul distance.

Item Unit

B12.05 Street Lighting:

- a) Excavation
 - i) of trenches in soft material up to 2 m

below ground level cubic metre (m³)

- ii) Hand excavation in all classes of material cubic metre (m³)
- b) Extra over items B12.06 (a)(1) for excavation in

hard material

c) Backfilling of trenches and compaction to 90 %

of modified AASHTO density using : cubic metre (m³)

- i) The excavated material cubic metre (m³)
- ii) Imported selected material (free haul 1,0 km) cubic metre (m³)
- d) Overhaul on excavated material carted to spoil cubic kilometre and backfill material for haul in excess of 1,0 km (m³-km)

The unit of measurement shall be the cubic metre of material excavated or backfilled as directed by the Employer's Agent for Street Lighting.

The tendered rates shall include full compensation for all operations necessary for completing the work as specified.



C.77 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

The excavation and backfill of material will, for the purpose of measurement and payment, be classified as specified under clause 2105.

Subitem B12.05 (d) shall be the cubic metre of overhaul material hauled in excess of 1,0 km multiplied by the overhaul distance.

C.78 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B4. SECTION 1300 : CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS

B 1302 : **GENERAL REQUIREMENTS**

Add the following to clause 1302(a):

No specific campsite has been earmarked for this Contract and it will be up the Contractor to make his own arrangements with the council or property owners for a suitable camping site. (Possible sites will be indicated during the site inspection.)

It is a requirement of the Contract that the Contractor shall erect a security fence around the campsite with a six-metre double leaf security gate. The security fence shall be at least two metres high, be clad with diamond mesh, have sufficient secure straining posts and lateral wire supports and shall have a functional and presentable appearance.

The Contractor is to clear and maintain a two metre wide strip within the camp along all boundaries of the camp. No plant, material, sheds or buildings will be permitted within the two metre wide cleared area.

Proper latrines shall be provided at each construction area. The latrines shall be regularly and properly maintained and shall be removed on completion.

The tendered rates and amounts for the relevant items in the schedule of quantities shall include full compensation for all additional costs which may arise from complying with the above requirement. Claims for additional compensation will not be considered.

The Contractor is duly warned that the proposed site for a possible campsite may be within and adjacent to occupied residential erven and the temporary use thereof is subject to all normal bylaws, The Contractor may not house any employees other than the night watchmen (maximum of two) on the campsite.

B1302(d: LIAISON OFFICER

a) Appointment

The Contractor shall if instructed to do so appoint a Liaison Officer or Officers after consultation with the local community, the Employer's Agent and the Employer. The Liaison Officer(s) shall be appointed as a member of the Contractor's management personnel and the Contractor's normal employment conditions shall be applicable to the appointment. The Contractor shall disclose his normal employment conditions to the Employer's Agent when called upon to do so.

C.79 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

b) <u>Duties for the Liaison Officer</u>

The Liaison Officer(s) shall

- (i) be available in Site daily between the hours agreed on by the Contractor, the Employer and the Employer's Agent from time to time;
 - (ii) determine, in consultation with the Contractor, the needs of the temporary Labourers for relevant skills Training. He is responsible for the identification of suitable trainees and shall attend one of each of the training sessions,
 - (iii) communicate with the Contractor and the Employer's Agent to determine the labour requirements with regard to numbers and skills,
 - (iv) assist in maintaining relations, and when applicable partake in labourer grievance and dispute procedures,
 - (v) assist in and facilitate the recruitment of suitable temporary labour and the establishment of the Labour Register,
 - (vi) attend all meetings in which the local community and/or labourers are present or are required to be represented,
 - (vii) assist in the identification, and screening of labourers from the local community in accordance with the Contractor's requirements,
 - (viii) inform temporary labourers of their conditions of temporary employment, and inform temporary labourers as early as possible when their period of employment will be terminated,
 - (ix) attend disciplinary proceedings to ensure that hearings are fair and reasonable,
 - (x) keep a daily written record of his interviews and community liaison activities,
 - (xi) carry out specific tasks ordered by the Employer's Agent,
 - (xii) perform such other duties as required and agreed upon between all parties concerned.

c) Remuneration

The remuneration of the Liaison Officer(s) shall be determined jointly by the Contractor, the Employer's Agent and the Employer.

The Liaison Officer(s) shall only be employed and paid for the period in which the duties of a Liaison Officer are required as agreed on by the Employer's Agent and the Contractor.



C.80 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

A Prime Cost Sum is provided in the Bill of Quantities to cover the remuneration of the Liaison Officer(s).

B1303 : PAYMENT

Item Unit

Add the following after the fourth paragraph:

Should the combined extended total tendered for subitems (a), (b) and (c) exceed 15 % of the tender sum, (excluding VAT), the Tenderer shall state his reasons in writing for tendering in this manner (see Part 2 "Reurnable Documents" Form H: Contractor's Establishment on Site).

Add the following payment item:

Item Unit

B13.02 Provision of Liaison Officer to keep contact with Local Residents, Residents Association and news media

Man Months

The tendered sum shall be in full compensation to the Contractor for appointing a Liaison Officer from a reputable source to a maximum of R....../month. The appointment will be to the approval of the Employer's Agent, and all media releases will be to the approval of the Employer's Agent. The Liaison Officer shall be charged with the duty of the work being undertaken and the effects thereof on the community, as well as being responsible for liaisons with the news media and local residents association, civic associations and politicians. Dedicated telephone and fax facilities shall be provided for the Liaison Officer's sole use and the facility numbers thereof must be advertised on a board on site and in the media.

Item Unit

B13.03 Liaison Officer(s)

a) Remuneration of Liaison Officer(s) prime cost (PC)

sum

b) Contractor's charge to allow for handling costs and profit in

respect of subitem 13.03(a) percentage (%)

c) Provision of transport for Liaison Officer(s)

prime cost (PC)

sum

C.81 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

 d) Contractor's charge to allow for handling costs and profit in respect of subitem 13.03(c)

percentage (%)

- (ii) Payment under the PC sum provided in subitem 13.03(a) to cover the employment and remuneration of the Liaison Officer(s) shall be effected in accordance with the provisions of Clause 45.1 of the General Conditions of Contract.
- (iii) The tendered percentage in subitem 13.03(b) is the percentage of the amount actually spent under subitemb 13.03(a) that will be paid to the Contractor in full compensation for the Contractor's handling costs and profit in respect of the employment and remuneration of the Liaison Officer(s).
- (iv) Payment under the PC sum provided in subitem 13.03(c) to cover costs incurred in the provision of transport for the Liaison Officer as agreed upon by the Employer, the Employer's Agent and the Contractor shall be effected in accordance with the provisions of Clause 45.1 of the General Conditions of Contract.
- (v) The tendered percentage in subitem 13.03(d) is the percentage of the amount actually spent under subitem 13.03(c) that will be paid to the Contractor in full compensation for the Contractor's handling costs and profit in respect of the provision of transport for the Liaison Officer(s).

Item Unit

B13.04 Environmental Management

 Environmental Management Officer appointed by the Employer's Agent

Provisional Sum (Prov

Sum)

b) Add contractor's charges for item B 13.05(a)

Persentage (%)

Subitem B 13.04 (a) shall be for work carried out by the Environmental Management Officer

C.82 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B5. SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE EMPLOYER'S AGENT'S SITE PERSONNEL

B1402: OFFICES AND LABORATORIES

a) General

Add the following:

"All offices and laboratories shall be supplied with approved burglar proofing."

b) Offices

Add the following subsubclauses:

"xv) Steel plan cabinets shall be able to accommodate two hundred A0 sized drawings hanging vertically from approved holders."

B1403 : HOUSING

Add the following:

"The Contractor is not required to provide any housing for the Employer's Agent's supervisory staff as set out under clause 1403 (a), (b), (c) and (d).

B1404 : SERVICES

c) Maintenance

Replace the contents of this subclause with the following:

The Contractor shall supply all labour, equipment and materials required for keeping the offices, laboratories and carports in a neat and clean conditions and shall immediately undertake any repairs, requested by the Employer's Agent to the offices laboratories and carports.

d) <u>Laboratories</u>

Add the following:

It is a requirement of this Contract that all testing shall be carried out by SANAS accredited laboratory.



C.83 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B6. SECTION 1500: ACCOMMODATION OF TRAFFIC

B1502 : GENERAL REQUIREMENTS

b) Providing temporary deviation

Add the following:

"The Contractor shall keep the traffic department fully informed with regard to any changes in the normal traffic flow and obtain their approval for these changes."

e) Access to properties

Add the following:

Should the Contractor require, and the Employer's Agent agrees in writing to the temporary closing of any street, road, footpath or entrance, then the Contractor shall give notice (seven days in advance) of the intended closure and its probable duration to the occupiers of premises along the route affected and the Contractor shall punctually, re-open the route at the time agreed to by the Employer's Agent.

Add the following subclauses:

C.84 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B7. SECTION 1700 : CLEARING AND GRUBBING

B1702: **DESCRIPTION OF WORK**

a) Clearing

Add the following after the first paragraph:

Where shown on the drawings or instructed by the Employer's Agent, existing brick or concrete structures shall be demolished and all rubble removed and disposed of at approved dumping sites provided by the Contractor in accordance with the Employer's Agent's instructions.

B1703 : EXECUTION OF WORK

a) Areas to be cleared and grubbed

Delete "normally" in the second line of the second paragraph.

c) Disposal of material

Replace the second paragraph with the following:

The Contractor shall dispose of all trees, tree stumps, rubble and all non-combustible rubbish at approved dumping sites provided by the Contractor.

Lump sum

Item Unit

B17.11 Demolition and disposal of structures (description of structures and peg-distance to be given)

The tendered lump sum for each structure shall include full compensation for the complete demolition of the structures (including foundations to 0,5 m below natural ground level) and the disposal of all rubble at approved dumping sites provided by the Contractor.

Item Unit

B17.13 Demolition of buildings and removal of rubble:

a) Concrete or Concrete foundations cubic metre (m³)

b) Brickwork, stone masonry work, brick walls, precast concrete walls cubic metre (m³)

The unit of measurement shall in each case be the cubic metre of concrete, concrete foundations, brickwork, stone masonry work, brick walls or precast concrete walls removed.

The tendered rates shall include full compensation for demolishing, loading, transport, and disposal of the rubble, including for reinforcement and all incidentals, at an approved location within a free haul distance of 1 km as well as for the necessary excavation and backfilling. if the Employer's Agent orders that

C.85 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

the rubble is to be placed in fill, payment shall then be made in accordance with clause 3312 of the specifications under item B33.01.

B11. SECTION 5100: PITCHING, STONEWORK AND PROTECTION AGAINST EROSION

B5101 SCOPE

Add the following:

"The section also covers the use of precast facing units to protect steep slopes on environmental berms.

Units shall be blocks of the Loffelstein type or stadium seating to the Grinaker specification. Units shall be manufactured by an approved supplier and shall be constructed of robust durable concrete. Prior to laying units, berm faces shall be accurately formed to line and level. Geofabric and geospacer material shall be placed against the exposed slope and a layer of granular material shall then be placed prior to laying of concrete units."

B5102 : MATERIALS

c) <u>Sand</u>

Add the following subclauses:

i) <u>Edge beams</u>

Edges without concrete channels or kerbs shall be restrained by means of Class 25/19 concrete edge beams to the dimensions shown on the drawings or as directed by the Engineer.

ii) Sand for bedding

Add the following:

The sand shall be of uniform moisture content when spread and shall be protected against rain when stockpiled on site prior to spreading.

d) Paving blocks

Delete the first paragraph and replace with:

Paving blocks shall comply with the requirement of the specification for "Precast Concrete Paving Blocks issued by the Concrete Masonry Association."



C.86 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

The curing period of the concrete paving blocks at the factory, before moving and delivering to site shall be a minimum of fourteen (14) days. Should the blocks not have reached their strength after fourteen (14) days of curing, they shall be cured for such additional period as is necessary to achieve the required strength.

C.87 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B5106 : SEGMENTED BLOCK PAVING

b) Sand for bedding

Add the following:

The moisture content of the sand when spread shall be 6 % +/- 2 %. Where the sand bed is accidentally compacted before the units are laid, it shall be raked and rescreeded evenly in a loose condition. If sand has been spread and the work cannot be completed on the same day, the sand shall be removed, and stockpile for re-use on another day.

c) <u>Laying of the paving blocks</u>

Delete the first two paragraphs and replace by the following:

i) <u>Laying of blocks</u>

Blocks shall be placed on the screeded sand bed to the indicated herringbone, basket weave or stretcher laying pattern, care being taken to maintain alignment and the specified bond throughout the job. To assist in maintaining control of alignment and bond, string lines shall be used. The joint width in the completed paving shall be 2 to 6 mm.

Where possible the first row shall abut against an edge restraint with a gap of 2 to 4 mm. In each row all full units shall be laid first. Closure units shall be cut and fitted subsequently. The closure units shall consist of not less than 25 % of a full unit.

Units may only be cut using a disc cutter fitted with either a concrete standard masonry or diamond disc.

Infill spaces between 25 and 50 mm wide shall be filled with class 25/13 concrete. For smaller spaces dry packed mortar shall be used.

Any foot or barrow traffic shall use boards overlaying paving to prevent disturbance of units prior to mechanical compaction. No other construction traffic shall be allowed on the pavement at this stage of construction.

After block laying the sand bedding shall be fully compacted and the blocks brought to design levels and profiles by means of a suitable plate compactor. Sufficient passes shall be made to compact the bedding sand and produce an even surface.

The compactor shall be a high frequency low amplitude mechanical flat-plate vibrator having a plate area sufficient to cover a minimum of 12 units and an energy output suitable to compact the sand bedding layer.

C.88 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Compaction shall proceed as closely as possible following laying and prior to the acceptance of any traffic. Compaction should not be attempted, however, within one metre of the laying face. Compaction shall continue until lipping has been eliminated between adjoining units. Joints shall then be filled and compacted as hereinafter described.

All work to within one metre of the laying face must be left fully compacted at the completion of each day's laying. Any units damaged during compaction shall be immediately removed and replaced.

ii) Joint filling

As soon as practical after construction, in any case prior to the termination of work on that day and prior to the acceptance of construction traffic, dry sand for joint filling shall be spread over the pavement.

The sand should be broomed to fill the joints, and a further pass with the vibrator plate made to vibrate the sand into the joints. Additional sand shall be spread over the surface if required.

iii) Pre-loading of pavement

As soon as possible after joint filling, construction traffic shall be encouraged to use the pavement to achieve maximum "lockup".

iv) Removal of excess sand

Prior to opening the pavement to normal traffic, all excess sand shall be removed.

g) Finishing requirements

i) Segmental block paving

Delete this subclause and replace with the following:

The completed paving shall be even, neat and flush with the kerb or sidebeam edging and may not lie below the side of the kerbing. The finished surface of the paving shall present a regular and smooth appearance to the eye, in the opinion of the Employer's Agent, and the paving shall be so laid that water will not pond on the surface. The finished surface of the paving shall, after 3 months after opening to traffic or pedestrians, be accurate within the following limits:

(i)	PAVING	(ii)	PERMISSIBLE
			DEVIATION



C.89 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Founding layers:		(vii)	
Top of subbase	e layer from designated level	(viii)	+/- 10 mm
Thickness of 25	5 mm compacted sand bedding layer	(ix)	+/- 10 mm
Finished paving	1:	(xviii)	
Line of pattern:		(xix)	
(xii)	i) from any 3 m straight-edge, not exceeding	(xx)	10 mm
(xiii)	ii) from any 20 m straight, not exceeding	(xxi)	20 mm
(xiv)	Vertical deviation from 3 m straight-edge:	(xxii)	
(xv)	i) at kerbs, channels, gullies, manholes and	(xxiii)	0, + 3 mm
other edge restraints		(xxiv)	10 mm
(xvi)	ii) elsewhere, subject to adjustment necessary	(xxv)	
for vertical	corner, not exceeding	(xxvi)	3 mm
Difference in su	urface level or adjacent units, not exceeding		



C.90 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B12	SECTION 6100: FOUNDATIONS FOR STRUCTURES	
B6106	FOUNDING	
	Add the following clause:-	
	"Where the concrete is cast directly against excavated earth factshall be wetted just prior to the casting of concrete."	es, the surfaces
B6108	BACKFILL AND FILL NEAR STRUCTURES	
a)	Fill within restricted area	
	Add the following to this clause.	
	"In the immediate vicinity of any structural concrete and subject the Employer's Agent, only hand-operated mechanical compact shall be used to achieve the required density."	
B6115	MEASUREMENTS AND PAYMENT	
	Add the following pay item:	
	"Item	Unit
B61.02(e)	Excavate in all materials for barrier wall foundation trenches to dimensions shown on drawings	metre (m)
	The rate shall include full compensation of excavation, backfill compaction of the backfill."	of foundations and
B13.	SECTION 6200: FALSEWORK, FORMWORK AND CONCRET	ΓE FINISH
B6201	SCOPE	

Add the following clause:

"No formwork will be measured when concrete is cast directly against the sides of an excavation or earth."

C.91 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B14. SECTION 6400: CONCRETE FOR STRUCTURES

B6416 MEASUREMENT AND PAYMENT

Add the following paragraph at the end of item 64.01

"Where concrete is cast directly against the face of the excavations or earth, the volume of concrete measured for payment shall be the volume based on the dimensions detailed on the drawings plus a 100mm allowance for over-break on the vertical or sloping side adjoining the excavation or earth. No formwork shall be measured when the concrete is cast against the face of the excavations or earth."

Add the following:

*Item

The unit of measurement shall be the square metre of reinforced concrete/ brick retaining wall.

The tendered rate shall include full compensation for all labour, plant, tools and materials required to construct the wall in accordance with the detail on drawings.

Unit

B6414 ROUTINE INSPECTION AND TESTS

Add the following additional subclause:

"d) Process Control

The costs of all Process and/or Quality control testing (including the making up of, curing and testing of concrete cubes) shall be borne by the contractor."



C.92 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B15.	SECTION 6600: NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES	
B6607	MEASUREMENT AND PAYMENT	
	Item	Unit
B66.29	Precast concrete bollards	number (no)
	The unit of measurement of precast concrete bollard shall be bollards constructed complete in accordance with the drawin	

*Item Unit

B66.30 Precast concrete balustrade metre (m)

The unit of measurement shall be the metre of precast concrete balustrade complete in accordance with drawings. Concrete balustrade shall include all work above the top of the bridge deck concrete, ramp or staircase and shall also include any kerbing, slots and kerbing forming an integral part of the concrete balustrade.

The tendered rate shall include full compensation for all materials, labour, plant and other incidentals required for constructing the bollards complete as specified.

The tendered rate for precast concrete balustrade shall include full compensation for all precast prestressed and Insitu cost of concrete elements, formwork, grout and labour required to erect the balustrade in accordance with specifications.



C.93 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

B16. SECTION B8500: BRIDGE LIGHTING

B8501 SCOPE

This section covers the provision of electrical reticulation for lighting the inside of the underpass.

B8502 MEASUREMENT AND PAYMENT

*Item Unit

B85.01 Bridge lighting complete

Prov. Sum

This item will be used on the instruction of the Employer's Agent and shall cover the specified lighting at the time of instruction.

C.94 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4.3 PART C: OCCUPATIONAL HEALTH AND SAFETY

C1. OCCUPATIONAL HEALTH AND SAFETY ACT 1993: HEALTH AND SAFETY SPECIFICATION

CONTENTS

- C1.1 INTRODUCTION
- C1.2 SCOPE
- C1.3 GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS
- C1.4 OPERATIONAL CONTROL

C1.1 Introduction

In terms of the Construction Regulation 4(1) (a) of the Occupational Health and Safety Act, No. 85 of 1993, **MAKHUDUTHAMAGA LM**, as the Client, is required to compile a Health & Safety Specification for any intended project and provide such specification to any prospective tenderer.

The Client's further duties are as in C3.5.1.3.1.1 below and in the **Construction Regulations**, **2014**. This specification has as objective to ensure that Principal Contractors entering into a Contract with the **MAKHUDUTHAMAGA LM** achieve an acceptable level of OH&S performance. This document forms an integral part of the Contract and Principal and other Contractors should make it part of any Contracts that they may have with Contractors and/or Suppliers.

Compliance with this document does not absolve the Principal Contractor from complying with minimum legal requirements and the Principal Contractor remains responsible for the health & safety of his employees and those of his Mandataries.

C1.2 Scope

Development of a health & safety specification that addresses all aspects of occupational health and safety as affected by the abovementioned contract work.

The specification will provide the requirements that Principal Contractors and other Contractors will have to comply with in order to reduce the risks associated with the abovementioned contract work that may lead to incidents causing injury and/or ill health, to a level as low as reasonably practicable.

C.95 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C1.3 General Occupational Health & Safety Provisions

- a) Hazard Identification & Risk Assessment (Construction Regulation 7)
 - (i) Risk Assessments

Risk Assessment headings that have been identified as possibly applicable to the abovementioned contract work are listed below. The information is, by no means, exhaustive and is offered as assistance to Contractors intending to tender.

Based on the Risk Assessments, the Principal Contractor must develop a set of sitespecific OH&S rules that will be applied to regulate the OH&S aspects of the construction.

The Risk Assessments, together with the site-specific OH&S rules must be submitted to the Employer before mobilisation on site commences.

Despite the Risk Assessments listed in Annexure 3, the Principal Contractor is required to conduct a baseline Risk Assessment and the aforesaid listed Risk Assessments must be incorporated into the base-line Risk Assessment. The baseline Risk Assessment must further include the Standard Working procedures (SWP) and the applicable Method Statements based on the Risk Assessments

All out-of-scope work must be associated with a Risk Assessment.

(ii) Review of Risk Assessments

The Principal Contractor is to review the Hazard Identification, Risk Assessments and SWP's at each Production Planning and Progress Report meeting as the Contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes.

The Principal Contractor must provide the Client, other Contractors and all other concerned-parties with copies of any changes, alterations or amendments as contemplated in above.

(iii) List Of Risk Assessments

- Clearing and Grubbing of the area/site
- Site establishment including:

C.96 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- Office/s
- Secure/safe storage for materials, plant and equipment
- Ablutions
- Sheltered eating area
- Maintenance workshop
- Vehicle access to the site
- Dealing with existing structures
- · Location of existing services
- Installation and maintenance of temporary construction electrical supply, lighting and equipment
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: the employer is also responsible for the OH&S of non-employees affected by his/her work activities)
- Health risks arising from surroundings as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning, etc.
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Dealing with HIV/Aids and other diseases
- Use of portable electrical equipment including:
 - Angle grinder
 - Electrical drilling machine
 - Skill saw
- Excavations including:
 - Ground/soil conditions
 - Trenching

C.97 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- Shoring
- Drainage of trench
- Loading and offloading of trucks
- Aggregate/sand and other materials delivery
- Manual and mechanical handling
- Lifting and lowering operations
- Driving and operation of construction vehicles and mobile plant including
 - Trenching machine
 - Excavator
 - Bomag roller
 - Plate compactor
 - Front end loader
 - Mobile cranes and the ancillary lifting tackle
 - Parking of vehicles and mobile plant
 - Towing of vehicles and mobile plant
- Use and storage of flammable liquids and other hazardous substances
- Layering and bedding
- Backfilling of trenches
- Use of explosives
- Protection from overhead power lines
- As discovered by the principal contractor's hazard identification exercise
- As discovered from any inspections and audits conducted by the client or by the principal contractor or any other contractor on site
- As discovered from any accident/incident investigation.

b) Legal Requirements

All Contractors entering into a Contract with the **MAKHUDUTHAMAGA LM** shall, as a minimum, comply with the:

C.98 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- Occupational Health & Safety Act and Regulations (Act 85 of 1993). A current, up-to-date copy of the OHS Act must be available on site at all times.
- Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993). The
 principal Contractor will be required to submit a letter of Registration and "goodstanding" from the Compensation Insurer before being awarded the Contract.
 A current, up-to-date copy of the COID Act must be available on site at all times.
- Where work is being carried out on mines' premises the Contractor will have to comply with the Mine Health & Safety Act and Regulations (Act. 29 of 19960 and any other OH&S requirements that the mine may specify. A current, up-todate copy of the OHS Act must be available on site at all times.
- c) Structure and Responsibilities
 - (i) Overall Supervision and Responsibility for OH&S
 - * It is a requirement that the Principal Contractor, when he appoints Contractors (Subcontractors) in terms of Construction Regulations 7 he includes an OHS Act Section 37(2) agreement: "Agreement with Mandatory" in his agreement with such Contractors.
 - *Any OH&S Act (85/1993), Section 16(2) appointee/s as detailed in his/her/their respective appointment forms
 - *A full time Safety Officer
 - (ii) Further (Specific) Supervision Responsibilities for OH&S

The Contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations.

Copies of appointments must be submitted to the **MAKHUDUTHAMAGA LM** together with concise CV's of the appointees.

(iii) Training and Competence

The contents of all training required by the Act and Regulations shall be included in the Principal Contractor's OH&S plan. The Principal Contractor shall be responsible for ensuring that all relevant training is undertaken. Only accredited Service Providers shall be used for OH&S training. The Principal Contractor shall ensure that his and other Contractors' personnel appointed are competent and that all training required to do the work safely and without risk to health, has been completed before work commences. The Principal Contractor shall ensure that follow-up and refresher training

C.99 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

is conducted as the contract work progresses and the work situation changes. Records of all training must be kept on the OH&S file for auditing purposes.

d) Notification of Construction Work (Construction Regulation 3.)

The Principal Contractor must, where the Contract meets the requirements laid down in Construction Regulation 3, within 5 working days, notify the Department of Labour of the intention to carry out construction work and use the form (Annexure A in the Construction Regulations) for the purpose. A copy must be held on the OH&S File and a copy must be forwarded to the **MAKHUDUTHAMAGA LM** for record keeping purposes.

e) Public Health & Safety (Section 9 of the OH&S Act)

The Principal Contractor shall be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes Non-employees entering the site for whatever reason, the surrounding community and Passers-by to the site.

f) Accommodation of Traffic

The contractor shall develop a Traffic management Plan (to include Traffic Control Plans ("TCP") and Vehicle Movement Plans)

It is a condition of this contract that traffic is accommodated taking into account the provisions of the latest edition of the South African Road Traffic Signs Manual as modified to suit site conditions.

The Traffic Management Plan shall be communicated to stakeholders in the municipality and community as follows: Large information sign at outside the entrances of the site will provide details of the project, including: Description of the Works, Duration of the Works, Proposed Start and End Dates of the Works, Contact details of the Site Manager.

The contractor shall pay specific attention to the accommodation of pedestrian traffic along the cross roads where the safety of pedestrians could be compromised as a result of the works.

C.100 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Where pedestrians have to cross the site, the contractor shall ensure that the pedestrians are safeguarded and shall be able to cross the site without being endangered. The pedestrians should not be able to enter areas where works are taking place.

g) Operational Procedures

Each construction activity shall be assessed by the Principal Contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires the Principal Contractor:

- to be conversant with Construction Regulations
- to comply with their provisions, and
- Include them in his OH&S plan where relevant.

h) Emergency Procedures

Simultaneous with the identification of operational procedures, the Principal Contractor shall similarly identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the Principal Contractor's OH&S plan.

i) Personal & Other Protective Equipment (Sections 8/15/23 of the OH&S Act)

The Contractor shall identify the hazards in the workplace and deal with them. He must either remove them or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under the hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply Employer's Agenting and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the Contractor shall inform employees regarding this and issue, free of charge, suitable

C.101 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in the hazardous environment.

It is a further requirement that the Contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed, but an alternative solution has to be found that may include relocating or discharging the employee.

The Principal Contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non-conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

j) Accidents and Incident Investigation (General Administrative Regulation 9)

The Principal Contractor shall be responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigation shall be entered into an accident/incident register listed in paragraph 2.4.1.

The Principal Contractor shall be responsible for the investigation of all minor and non-injury incidents as described in Section 24(1)(b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Reporting: The Contractor shall provide the **Makhuduthamaga LM** with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

- k) Checking, Reporting and Corrective Actions
 - 1. Monthly Audit by Client (Construction Regulation 5)

C.102 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Makhuduthamaga LM will conduct monthly audits to ensure that the Principal Contractor has implemented and is maintaining the agreed and approved OH&S plan.

2. Other Audits and Inspections by the Makhuduthamaga LM

Makhuduthamaga LM reserves the right to conduct other ad-hoc audits and inspections as deemed necessary. This will include site safety walks.

3. Contractor's Audits and Inspections

The Principal Contractor is to conduct his own monthly internal audits to verify compliance with his own OH&S management system as well as with this specification.

4. Inspections by OH&S Representative's and other Appointees

OH&S representatives shall conduct weekly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle,

plant and machinery drivers, operators and users must conduct daily inspections before start-up.

5. Recording and Review of Inspection Results

All the results of the above-mentioned inspections shall be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

C1.4 COVID – 19 Safety Plan

The Contractor shall be responsible for the Health & Safety on all construction/maintenance and health and safety requirements of any activities may not be compromised during the time of COVID-19 Pandemic. If any activity cannot be undertaken in a health and safety manner due to lack of suitable qualified personnel being available or social distancing being implemented, the activity should not commence. The Contractor shall prepare a COVID-19 Safety Plan, in accordance with the COVID-19 specifications prepared by the Occupational Health and Safety Agent. The COVID-19 shall be compliant with the following regulations & guidelines:

C.103 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- 1. The Department of Employment and Labour has appealed to employers to use the prescriptions of the Occupational Health and Safety Act, Act 85 of 1993 in particular the Hazardous Biological Agents Regulations governing workplaces in relation to Coronavirus Disease 2019 cause by the SARS-CoV-2 and the COVID-19 Occupational Health and Safety Measures in Workplaces COVID-19 (C19 OHS), 2020.
- 2. The OHS Act read with the Hazardous Biological Agents Regulations requires the employer to provide and maintain as far as is reasonably practicable a working environment that is safe and without risks to the health of employees. Section 8(2)(b) requires steps such as may be reasonably practicable to eliminate or mitigate any hazard or potential hazard before resorting to personal protective equipment (PPE). However, in the case of COVID19, a combination of controls is required, although the main principle is to follow the hierarchy of controls.
- 3. Section 14 of the Occupational Health and Safety, (OHS) Act obliges employees to take reasonable care for health and safety of him- or herself and others who may be affected by their acts or omissions. This obliges employees to comply with any duty or requirement imposed by the employer or any other person by OHS Act to co-operate with the employer or person to enable that duty or requirement to be performed or complied with. Employees are also required by OHS Act to carry out lawful orders and obey the health and safety rules and procedures laid down by is employer or by anyone authorized by his employer in the interest of health and safety.

COVID -19 Risk Assessment

The HIRA methodology is to provide specific focus on COVID-19 and adapt the measures required and taking into account the specific circumstances of the workplace. The Contractor must focus on the identification of different exposure level, high contact activities and identification of vulnerable workers e.g. immunocompromised employees and employees 60 years and above and special measures for their protection, including protection against unfair discrimination or victimization.

COVID-19 START UP - CONSTRUCTION CHECKLIST

Phase 1 – Pre-Construction	Yes / No	Proof
Upon receiving an instruction to commence with the works. The Contractor must obtain trade certificate with CIPC required and essential permits for all		



C.104 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

ampleyees signed (visit himsets) for southfasts and southfasts and southfasts				
employees signed. (visit bizportal for certificate and essential staff permit Form				
2 Annexure A) COVID-19 Ready Workplace Plan including: The planned date the construction site to start; The hours it will be open A timetable programme, indicating the how the construction teams will be allocated work to ensure and enable appropriate measures to be taken to avoid and reduce the spread of the virus; List of employees who can work from home, employees who are 60 years or older and those with comorbidities. Proof of Appointment of a COVID-19 compliance officer responsible for the duties as outlined in regulation 16(6) of the said Notice COVID-19 Occupational Health and Safety Measures in Workplaces COVID-19 (C19 OHS), 2020				
Deep cleaning at Construction site, site offices, working areas, ablution facilities,				
welfare facilities, eating facilities, hand washing facilities, confined spaces.				
Security Access Controls implemented and register for all entries and exits on site.				
Availability of Sanitizer (with at least 70% alcohol content), sufficient clean water and soap on site for all employees				
Risk assessment to identify the potential health hazards that employees and other affected persons are or may be exposed to during the construction process and identify the appropriate risk mitigation measures.				
All medical certificates of fitness are still valid. Provide list and schedule of timeframe for invalid.				
Safe working procedure identifying potentially infected employees, sub- contractors, visitors and suppliers, the management of exposure to COVID-19 and a response plan.				
Dedicated eating areas identified within Social Distancing requirements.				
Register available for all employees with the following information included: o Age of Employees o Health status – (High risk immunocompromised) o Socio economic status/Unskilled Labour o Accommodation o Cross borders/towns/cities				
Medical Surveillance Programme and Procedure in place, communicated and				
implemented.				
Communication with workforce by mean of:				



C.105 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Full tin			
Appointment of COVID-19 Compliance Officer under Regulation 16(6)(a) of the Disaster Management Act to oversee the implementation of the Work place plan and adherence to the standards of hygiene and health protocols relating to COVID-19 at the work place			
Transp	ortation arrangement procedure of employees to, from and on sites.		
Accommodation arrangement procedure for employees			
Waste	Management plan and bins		
Items i	ncluded in the Bill of Quantities: COVID-19 OHS Plan COVID -19 Risk Assessment Signage & Decals – COVID-19 Face masks – according to Government requirements for different exposure – according to risk assessment. Surgical gloves – security & cleaning staff Safety Goggles for screening persons Screening Non-contact Thermometers Facility preparation – COVID-19 Safe		
0	Hand sanitizer 70% alcohol content		

Day 1 – Start-up			Proof
Declaration form of travelling before commencing to work completed and signed by employees.			
Safe Working Procedures communicated with the workforce before entering the site re Medical Surveillance, Screening, Social distancing requirements and site rules.			
Safe working procedure for Screening of employees before entering the workplace and what frequency.			
Safe Working Procedure implemented for employees arriving at work with a temperature or other symptoms of COVID-19.			
Issuing of PPE (all workers to wear cloths masks or homemade item to cover the mouth and nose at all times if not wearing task specific PPE)			
Induction training must be conducted in a well-ventilated area in smaller manageable groups. o The induction should include the following but is not limited to the list to the safe usage and disposal of PPE (Dust masks and gloves) o Emergency procedures o COVID-19 Awareness o Social distancing rules o Site Rules			



C.106 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Awareness Posters displayed and signage around the workplace on keeping at least 1.5 meters social distancing.				
Social distancing 1.5 meters rule applied by application of decals in site office and working areas.				
Safe working procedure for Chemical storage and preventative measures to prevent cross-contamination.				
Chemical stored in container on site clearly marked and stored according to manufacturer's Material Safety Data sheet – Deep cleaning disinfectants and Sanitizers. (MSDS/SDS to be available on site)				
Alcohol and Drug Testing procedure.				
Ablution facilities procedure addressing high risk areas and preventative controls implemented.				
Emergency Plans implemented and communicated, and numbers displayed.				
Specialized work activities identified.				
Screening before entering the site o screen workers, at the time that they report for work, to ascertain whether they have any of the observable symptoms associated with COVID-19, namely fever, cough, sore throat, redness of eyes or shortness of breath (or difficulty in breathing) o Employees to immediately inform the employer if they experience any of the symptoms.				

C1.5 Measurement and Payment

Payment for the contractor's obligations in respect of the Occupational Health and Safety act and Construction Regulations shall be made through three payment items described below. The three payment items together shall include full compensation for all personnel (including a dedicated full time Construction Safety Officer), cost and incidentals in respect of compliance with the enforcement of the Health and Safety Specifications, which shall include for the compilation, presentation, implementation and maintenance of the Health and Safety Plan as contemplated. In tendering rates for the three items the contractor shall ensure that the sum of the amounts for the three items shall not be less than one percent (1%) of the Tender Amount.

Item Unit



C.107 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C1.1	Contractor's initial obligations in respect of the	
	Occupational Health and Safety Act and	
	Construction Regulations	Lump Sum

The full amount will be paid in one instalment only once:-

- a. The contractor has notified the Provincial Director of the Department of Labour in writing of the project.
- b. The contractor has made the required initial appointments of employees and sub-contractors.
- c. The client has approved the contractor's Health and Safety Plan.
- d. The contractor has set up his Health and Safety File.



C.108 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Item Unit

The tendered monthly amount shall represent full compensation for that part of the contractor's General obligations in terms of the Occupational Health and Safety Act and the Construction Regulations which are mainly a function of time. This includes inter alia payment of all costs for the appointment of all staff contemplated in the construction regulations and the transport of employees on site. Payment will be monthly only after payment for Item B1.1 has been made.

The tendered lump sum shall represent full compensation for the contractor meeting all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and for the preparation and submission of his Health and Safety File complete as envisaged on this specification to the Client's satisfaction.

This amount will be paid only once the contractor has met all his obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged on this specification to the Client's satisfaction.

The OH&S File (Construction Regulation 7)

As required by Construction Regulation 7, the Principal Contractor and other Contractors shall each keep an OH&S file on site. The following list is not exhaustive and shall only be used as a guide:

- Notification of construction work (Construction Regulation 4)
- Latest copy of OH&S Act (General Administrative Regulation 4)
- Copy of Construction Regulation 2014
- Copy of Project Safety Specification
- Proof of registration and good standing with COID Insurer (Construction Regulation

C.109 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

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- Induction Training Manual
- Induction training Attendance Register
- Toolbox talks Manual
- Toolbox talks Attendance Register
- PPE Issue Register
- Legal appointments (Include CV's' ID's and Proof of competencies)
- Medical Fitness Certificates (Issued by an occupational health practitioner) for all site workers including Managers _Include ID's and Next of kin details (Construction Regulation 4)
- OH&S plan agreed with the Client including the underpinning risk assessment/s, safe work procedures, and method statements (Construction regulation 7)
- OHS Structure / Organogram
- OHS Policy
- Evacuation / Emergency preparedness procedure
- Emergency Contact Numbers
- Traffic Management Plan
- Fall Protection Plan
- Copies of OH&S committee and other relevant minutes
- Designs/drawings
- A list of Contractors (sub-contractors) including copies of the agreements between the parties and the type of work being done by each Contractor (section 37(2)
- Appointment/designation forms Registers as follows:
- Accident/Incident register (Annexure 1 of the General Administrative Regulations)
- OH&S representatives' inspection register
- Construction vehicles and mobile plant inspections by controller

C.110 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- Daily inspection of vehicles, plant and other equipment by the operator/driver/user
- Excavations inspection
- Explosive powered tool inspection, maintenance, issue and returns register (incl. cartridges and nails)
- Fall protection inspection register
- Hand Tools register
- PPE use register
- First aid box contents
- Fire equipment inspection and maintenance
- Hazardous chemical substances record
- Ladder inspections
 - Lifting equipment register
 - Machinery safety inspection register (incl. machine guards, lock-outs etc.)
 - Stacking and storage inspection
 - Inspection of vessels under pressure
 - Inspection of work conducted on or near water
 - All other applicable records including safety officer reports.

Item Unit

C1.4 Health and safety obligation on COVID-19

month"

Payment of the rate per month for subitem C1.4 shall include full compensation for all the contractor's monthly obligations relevant to health and safety legislation on COVID-19.

C.111 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4.4 PART D: ENVIRONMENTAL MANAGEMENT PLAN

D1. ENVIRONMENTAL MANAGEMENT PLAN

CONTENTS

D1.1	SCOPE
D1.2	DEFINITIONS
D1.3	IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS
D1.4	LEGAL REQUIREMENTS
D1.5	ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS
D1.6	TRAINING
D1.7	ACTIVITIES/ASPECTS CAUSING IMPACTS
D1.8	ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES
D1.9	RECORD KEEPING
D1.10	COMPLIANCE AND PENALTIES
D1.11	MEASUREMENT AND PAYMENT

D1.1 Scope

This environmental management programme (EMP) sets out the methods by which proper environmental controls are to be implemented by the contractor. The duration over which the contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the General Conditions of Contract, and the project specifications, as the defects notification period (maintenance period).

The provisions of this EMP are binding on the contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract. In the event that any conflict occurs between the terms of the EMP and the project specifications or Record of Decision, the terms herein shall be subordinate.

The EMP is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any substantial changes shall be submitted to the Client in writing for approval.

C.112 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

The EMP identifies the following:

- Construction activities that will impact on the environment.
- Specifications with which the contractor shall comply in order to protect the environment from the identified impacts.
- Actions that shall be taken in the event of non-compliance.

D1.2 Definitions

Construction Activity: a construction activity is any action taken by the contractor, his subcontractors, suppliers or personnel during the construction process as defined in the South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7, 1998)

Environment: environment means the surroundings within which humans exist and that could be made up of -

- the land, water and atmosphere of the earth;
- micro-organisms, plant and animal life;
- any part or combination of (i) and (ii) and the interrelationships among and between them; and
- the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Environmental Aspect: an environmental aspect is any component of a contractor's construction activity that is likely to interact with the environment.

Environmental Impact: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Record of Decision: a record of decision is a written statement from the Department of Economic Development, Environment and Tourism, that records its approval of a planned undertaking to improve, upgrade or rehabilitate a section of road and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

Road Reserve: the road reserve is a corridor of land, defined by co-ordinates and proclamation, within which the road, including access intersections or interchanges, is situated. A road reserve may, or may not, be bounded by a fence.

Road Width: for the purposes of the EMP, the road width is defined as the area within the road reserve i.e. fence line to fence line, but also includes all areas beyond the road reserve that are affected by the continuous presence of the road, e.g. a reach of a water course.

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C.113 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

D1.3 Identification of Environmental Aspects And Impacts

The contractor shall identify likely aspects before commencing with any construction activity.

Examples of environment aspects include:

- waste generation
- stormwater discharge
- emission of pollutants into the atmosphere
- chemical use operations
- energy use operations
- water use operations
- use of natural resources
- noise generation

Thereafter the contractor shall programme his work in such a way that each cause and effect of a construction activity is also identified and the activity planned so as to prevent any impact from happening. If prevention is not practicable, or in the event of mishap or misapplication, the contractor shall provide plans and measures for the Employer's Agent's approval, which will limit and contain the magnitude, duration and intensity of the impact. The contractor shall demonstrate that he/she is capable of carrying out any repair and reinstatement of the damaged environment. These requirements shall be concurrent with the time constraints to produce an approved construction programme according to sub-clause 8.3 as amended by Particular Condition of the general conditions of contract and clause B1204 of these project specifications.

Listed below are some environmental impacts that could adversely alter an aspect of the environment through usual construction activities:

- Pollution of atmosphere, soil or water
- Destruction or removal of fauna and flora and effect on biological diversity
- Deformation of the landscape
- Soil erosion
- Destruction of historical/heritage sites
- Effect on the built environment
- Effect on agricultural land and wetlands

General good construction practice will play an important role in avoiding the occurrence of an Impact. The contractor's attention is drawn, in this regard, to E1008. Environmental Management of Construction Activities

C.114 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

D1.4 LEGAL REQUIREMENTS

a) General

Construction will be according to the best industry practices, as identified in the project documents. This EMP, which forms an integral Local Municipality part of the contract documents, informs the contractor as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. The contractor should note that obligations imposed by the EMP are legally binding in terms of environmental statutory legislation and in terms of the additional conditions to the general conditions of contract that pertain to this project. In the event that any rights and obligations contained in this document contradict those specified in the standard or project specifications then the latter shall prevail.

b) Statutory and other applicable legislation

The contractor is deemed to have made himself conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

D1.5 COMPLIANCE AND PENALTIES

The contractor shall act immediately when such notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. This record shall be submitted with the monthly reports and a verbal report given at the monthly site meetings.

Any avoidable non-compliance with the above-mentioned measures shall be considered sufficient ground for the imposition of a penalty

The following penalties shall apply for environmental violations:

a) Unnecessary removal or damage to trees

•	2600mm girth or less:	R 5 000 per tree
•	Greater than 2600mm, but less than 6180mm girth:	R10 000 per tree
•	Greater than 6180mm girth:	R30 000 per tree

b) Serious violations:

• Hazardous chemical/oil spill and/or dumping in non-approved sites:

C.115 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

	R10 00	00 per incident
•	General damage to sensitive environments:R 5 00	00 per incident
•	Damage to cultural and historical sites:R 5 00	0 per incident
•	Uncontrolled/unmanaged erosion (plus rehabilitation at contractor's cost):	
	R1 000 to R5 00	00 per incident
•	Unauthorised blasting activities: 5 00	00 per incident
•	Pollution of water sources:R 10 00	00 per incident

The Employer's Agent's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final.

c) Less serious violations:

Illegal hunting.

•	Littering on site.	:	R1	000 per incident
•	Lighting of illegal fires on site.	:	R1	000 per incident
•	Persistent or un-repaired fuel and oil leaks.	:	R1	000 per incident
•	Excess dust or excess noise emanating from site.	:	R1	000 per incident
•	Dumping of milled material in side drains or on grass	ed areas:	R1	000 per incident
•	Possession or use of intoxicating substances on site.	:	R	500 per incident
•	Any vehicles being driven in excess of designated			
	speed limits.	:	R	500 per incident
•	Removal and/or damage to flora or cultural or			
	heritage objects on site, and/or killing of wildlife.	:	R2	000 per incident

R2 000 per incident

Urination and defecation anywhere except in designated areas.
 R 500 per incident

The Employer's Agent's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final. The calculation shall include allied construction activities in the same way as the calculation of reduced payments under section 8200. The imposition of such a penalty shall not preclude the relevant provincial or national authority from applying an additional penalty in accordance with its statutory powers. Any non-compliance with the agreed procedures of the EMP is a transgression of the various statutes and laws that define the manner by which the environment is managed.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as it deems fit.

D1.6 MEASUREMENT AND PAYMENT

The cost of complying to this specification shall be deemed to be included in the rates Bided for this project.

C.116 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Item		Unit
D1.6.1	Eı	ontractor's time related obligations in respect of the nvironmental Management Plan and specification month
general function	obligation	onthly amount shall represent full compensation for that part of the contractor's ations in terms of the Environmental Management Plan which are mainly a ne. This includes inter alia payment of all costs for the appointment of all staff in the construction regulations and the transport of employees on site.
D1.6.2		enalty for unnecessary removal or damage to trees for the following ameter sizes
	(a) (b) (c)	2600mm girth or less
		easurement shall be the number of trees by diameter size removed unnecessary. The penalty rates applied shall be those stated in clause C3.5.2.10.
Item		Unit
D1.6.3		Penalty for serious violations
	(a)	Hazardous chemical/oil spill and/or dumping in non-approved sitesnum ber (No)
	(b) envi (c)	General damage to sensitive ronmentsnumber (No) Damage to cultural and historical
	(d)	Pollution of water cesnumber (No)
	(e)	Unauthorised blasting ritiesnumber (No)
	(f)	Uncontrolled/unmanaged erosion per incident, depending on environment impacts, plus rehabilitation at contractor's cost)number (No)
	(g)	Damage to sensitive vegetation within "no-go" areas of vegetation damaged impacts, plus rehabilitation thereof at contractor's costnumber (No)

The unit of measurement for B100.02 (a) to (g) shall be the number of serious violation incidents. The penalty rates to be applied shall be those stated in clause E3.5.2.10.



(No)

C.117 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Item Unit Penalty for less serious violations D1.6.4 a) Littering on site.....number (No) b) Lighting of illegal fires on site.....number (No) c) Persistent or un-repaired fuel and oil leaks.....number (No) d) Excess dust or excess noise emanating from site.....number (No) e) Dumping of milled material in side drains or on grassed areas.....number (No) f) Possession or use of intoxicating substances on site.....number (No) g) Any vehicles being driven in excess of designated speednumber (No) h) Removal and/or damage to flora or cultural or heritage objects on site, and/or killing of wildlife.....number (No) Illegal hunting.....number (No) Urination and defecation anywhere except in designated Areas.....number

The unit of measurement shall be the number of less serious violation incidents. The penalty rates applied shall be those stated in clause E3.5.2.10.

The Employer's Agent's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final. The calculation shall include allied construction activities in the same way as the calculation of reduced payments under section 8200. The imposition of such a penalty shall not preclude the relevant provincial or national authority from applying an additional penalty in accordance

with its statutory powers. Any non-compliance with the agreed procedures of the EMP is a transgression of the various statutes and laws that define the manner by which the environment is managed.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as it deems fit.

C.118 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4.5 PART F PROVISION OF THE TEMPORARY WORKFORCE

CONTENTS

F1	SCOPE
F2	INTERPRETATIONS
F3	PERMITTED SOURCES OF TEMPORARY WORKERS
F4	EMPLOYMENT RECORDS TO BE PROVIDED
F5	VARIATIONS IN WORKER PRODUCTION RATES
F6	TRAINING OF THE TEMPORARY WORKFORCE
F7	RECRUITMENT AND SELECTION PROCEDURES
F8	TERMS AND CONDITIONS PERTAINING TO THE EMPLOYMENT OF THE TEMPORARY WORKFORCE
F9	LABOUR RELATIONS AND WORKER GRIEVANCE PROCEDURES
F10	THE SUBCONTRACTORS' WORKFORCES
F11	MEASUREMENT AND PAYMENT

F1 SCOPE

This Specification covers the provisions and requirements relating to the provision of the temporary workforce.

F2 <u>INTERPRETATIONS</u>

F2.1 Supporting documents,

The Tender Rules, Conditions of Contract, Standard and Construction Specifications, Drawings and statutory minimum requirements relating to the employment and remuneration of labour shall *inter alia* be read in conjunction with this Specification.

F2.2 Definitions and abbreviations

For the purposes of this specification, the definitions given in the Conditions of Contract, the Standard Specifications and the Construction Specifications, together with the following additional definitions shall, unless the context dictates otherwise, apply:

C.119 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (i) "Key Personnel" means all contracts managers, site agents, materials and survey technicians, trainers, supervisors, foremen, skilled plant operators, artisans and the like, and all other personnel in the permanent employ of the Contractor or Subcontractor who posses special skills and/or who play key roles in the Contractor's or Subcontractor's operation
- (ii) "Project Committee" means a committee consisting of the Employer, the Employer's Agent, the Contractor, (or their nominated representatives) as well as representatives of the temporary workforce, which is convened from time to time at the discretion of the Employer's Agent, for the purposes of acting as an avenue for effective communication and liaison between all the parties referred to, in all matters pertaining to the Contract
- (iii) "Subcontractor" means any person or group of persons in association, or firm, or body corporate (whether formally constituted or otherwise) not being the Contractor, to whom specific portions or aspects of the Works are sublet or subcontracted by the Contractor in accordance with the provisions of the Contract
- (iv) "Worker" for the purposes of this Specification means any person, not being one of the Contractor's key personnel, nor any key personnel of any Subcontractor, who is engaged by the Contractor, a Subcontractor or the Employer to participate in the execution of any part of the Contract Works and shall include unskilled labour, semi-skilled and skilled labour, clerical workers and the like
- (v) "Workforce" means the aggregate body comprising of all workers and shall, unless the context dictates otherwise, include the workforces of the Contractor and all Subcontractors
- (vi) "Liaison Officer" means a representative from the temporary workforce, duly elected by them, to act on their behalf and through whom all matters pertaining to the temporary workforce can be channelised.

F2.3 Status

Where any provisions or requirements of this Specification are in conflict with anything elsewhere set out in the Contract, the provisions and requirements of this Specification shall take precedence and prevail.

C.120 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

F3 PERMITTED SOURCES OF TEMPORARY WORKERS

The Contractor shall as far as possible make optimum use of the human resources outside his own workforce and the workforces of all Subcontractors. The temporary workforce which is to be used in the execution of the Works in terms of Part A may consist of the workers of various communities and shall not be bound to one particular community.

F4 EMPLOYMENT RECORDS TO BE PROVIDED

- The Contractor shall maintain accurate and comprehensive records of all workers engaged on the Contract and shall provide the Employer's Agent at monthly intervals from the commencement of the Contract, with interim records substantiating the actual numbers of employment opportunities which have been generated to date and the amounts actually paid in respect thereof. Such interim records shall be in a format approved by the Employer's Agent.
- The Contractor shall, on completion of the Contract, and as a pre-requisite event to the release of any retention money in terms of the Conditions of Contract, provide the Employer's Agent with copies of the Terms of Employment as well as independently audited documentary evidence of the total number of temporary and permanent employment opportunities actually generated during the Contract.

F5 VARIATIONS IN WORKER PRODUCTION RATES

Notwithstanding anything to the contrary as may be stated in or inferred from any other provision of this Contract, the Contractor shall not be entitled to any additional payment or compensation whatever, in respect of any differences as may result between the production rates actually achieved by workers in the course of the execution of the Contract Works and those production rates on which he has based his tender.

F6 TRAINING OF THE TEMPORARY WORKFORCE

 Selected members of the workforce are to be provided with structured training in accordance with the provisions of Part G.

C.121 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- The Contractor shall make all necessary allowances in his programme of work to accommodate and facilitate the delivery of such structured training and shall comply fully with the requirements of Part G.
- The provision of structured training as described in Part G shall not relieve the Contractor of any of his obligations in terms of the Conditions of Contract and the Contractor shall remain fully liable for the provision, at his own cost, of all training of the workforce, additional to that as provided for in Part G, as may be necessary to achieve the execution and completion of the works strictly in accordance with the provisions of the Contract.

F7 RECRUITMENT AND SELECTION PROCEDURES

The Contractor shall be fully responsible for the recruitment and selection of workers to constitute the temporary workforce.

The Contractor shall advise the Employer's Agent in writing of the numbers of each category of temporary worker which he requires, together with the personal attributes which he considers desirable that each category of worker shall posses (taking due cognisance of the provisions of the Contract relating to training).

The Contractor shall, at his own cost, take all necessary actions to advertise within the communities comprising the personnel resources, the fact that temporary employment opportunities exist and the time and place where recruiting will occur.

The Contractor shall record in writing, the details of all persons applying for employment, including *inter alia*:

- (i) Name, address, age and sex
- (ii) Marital status and number of dependants
- (iii) Qualifications and previous work experience (whether substantiated or not)
- (iv) Period since last economically active
 - (v) Preference for type of work or task.
- The Contractor shall make his selection of workers from amongst the applicants, taking due cognisance of his requirements for the workforce and the provisions of the contract in regard to the provision of training to the workforce and in accordance with the following principles:

C.122 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (i) No potential temporary worker shall be precluded from being employed by the Contractor on the execution of the Works, by virtue of his lack of skill in any suitable operation forming part of the Works, unless -
 - all available vacancies have been or can be filled by temporary workers who already posses suitable skills, or
 - the Time for Completion allowed in the Contract, or the remaining portion of the Contract Period (as the case may be) is insufficient to facilitate the creation of the necessary skills.
- (ii) Preference shall be given to the unemployed and single heads of households.
- (iii) The Contractor shall, in so far as is reasonably practicable, give priority to accommodating the applicants' expressed preferences regarding the types of work for which they are selected.
- (iv) The selection process shall not be prejudicial to youth (over the age of fifteen years) and women.
- After making his selection, the Contractor shall advise the Employer's Agent thereof, in writing and the Employer's Agent shall, without undue delay, ratify the Contractor's selection.

The provisions of this clause shall apply *mutatis mutandis* in respect of the selection of additional or replacement members of the workforce as may be necessary from time to time during the Contract.

The Contractor shall, after selecting his temporary workforce, arrange at his own cost for the appointment of the Liaison Officer as representative of the workforce to act on their behalf with regards to all matters pertaining to the workforce.

F8 TERMS AND CONDITIONS PERTAINING TO THE EMPLOYMENT OF THE TEMPORARY WORKFORCE

F8.1 All temporary workers engaged in accordance with the provisions of the Construction Specifications, shall be employed on the terms and conditions of employment as are consistent with those as set out in this Contract. The Contractor shall implement and adhere strictly to such terms and conditions relating to the employment of the temporary workforce, and subject only to the

C.123 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

provisions of this Contract, shall not employ any temporary worker on terms and conditions which are less favourable to the worker or inconsistent with the standards and norms generally applicable to temporary workers in the Civil engineering Industry and applicable to the particular area.

F8.2 The Contractor shall pay to all temporary workers engaged in terms of Part A of the Construction Specifications, not less than the minimum rate of remuneration as specified by the Department of Labour for the Limpopo area

F9 LABOUR RELATIONS AND WORKER GRIEVANCE PROCEDURES

The Contractor, as the Employer of the workforce, shall be fully responsible for the establishment and maintenance at his own cost, of satisfactory labour relations on site and the resolution of all grievances of temporary workers as may occur.

- The Contractor shall at all times adhere to the accepted norms and standards of labour relations prevailing generally in the Civil Engineering Construction Industry and shall conduct himself in a fair and reasonable manner, within the constraints as may be imposed upon him by the terms of the Contract.
- In the event of any temporary worker engaged by the Contractor in terms of the Contract, being aggrieved with regard to his terms of employment, working conditions and training, he shall have the right, at his discretion, to be supported in any inquiry or disciplinary hearing or investigation instituted by the Contractor by one member of the temporary workforce and one member of the Project Committee, which persons shall be nominated by the worker.

In the event of any grievance not being satisfactorily resolved through the application of normal dispute resolution procedures, then either the Contractor or the worker concerned may require that the matter be referred to the Project Committee for further consideration, with a view to facilitate the resolution thereof.

F 10 THE SUBCONTRACTORS' WORKFORCES

The provisions of this Part F shall apply *mutatis mutandis* to the workforces employed by all Subcontractors engaged by the Contractor and the Contractor shall be fully responsible for ensuring, at his own cost, that the terms of every



C.124 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

subcontract agreement entered into are such as to facilitate the application of these provisions in respect of the workforces of all Subcontractors.

The Contractor shall at his own cost and to the extent necessary, assist and monitor all Subcontractors in the application of the provisions of this Specification, and shall, in terms of the Conditions of Contract, remain fully liable in respect of the acts, omissions and neglects of all Subcontractors, in respect of the application of the provisions of this Specification.

F 11 MEASUREMENT AND PAYMENT

The Contractor will not be separately reimbursed or compensated in respect of the provision of the workforce and creation of temporary employment opportunities and all the Contractor's costs associated with compliance with the provisions of this part of the Construction Specifications shall, except to the extent provided for in Part G as relevant, be deemed to be included in the rates tendered for the various items of work listed in the Bill of Quantities.

C.125 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C3.4.6 PART G PROVISION OF STRUCTURED TRAINING

CONTENTS

COI	PΕ
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- G2 INTERPRETATIONS
- G3 ENGINEERING SKILLS TRAINING
- G4 ENTREPRENEURIAL SKILLS TRAINING
- G5 MEASUREMENT AND PAYMENT

G1 SCOPE

This specification covers the requirements for the provision of the following training:

- (i) Specified structured training to selected members of the workforce and small, medium and micro enterprises (SMME's) by a selected Subcontractor as appointed by the Employer.
- (ii) Additional training deemed necessary by the Contractor, to members of the workforce and small, medium and micro enterprises (SMME's).

G2 <u>INTERPRETATIONS</u>

G2.1 <u>Supporting documents.</u>

The Tender Rules, Conditions of Contract, Standard, Supplementary and Specific Specifications and Construction Specifications and drawings shall *inter alia* be read in conjunction with this specification.

G2.2 Application

The provisions of this specification shall apply in respect of all workers and small, medium and micro enterprises other than the Contractor's key personnel, who are engaged on the execution of the works.

G3 ENGINEERING SKILLS TRAINING

The Contractor shall, from the commencement of the contract, implement a structured training programme comprising of the training delivered by the Selected Subcontractor and any additional training as provided for by the Contractor, in which the various skills required for the execution and completion

C.126 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

of the works are imparted to the workers, and where applicable, small, medium and micro enterprises engaged thereon, in a

programmed and progressive manner. Selected workers shall be trained progressively throughout the duration of the contract in the various stages of a particular type of work.

G3.2 <u>Training programme</u>

The skills training programme to be implemented by the Selected Subcontractor shall comply with the following minimum standards:

- a) Be accredited by the Civil Engineering Industry Training Scheme (CEITS) or other institution recognised by the Department of Labour, as being appropriate for application on this project. Accredited training refers to both the trainers as well as to the training materials.
- b) Be delivered by suitably qualified and experienced trainers accredited to do so.

G3.3 <u>In house training</u>

The Contractor shall provide with his tender, full details of any additional accredited and in-house training, viewed to be necessary by the Contractor, which he intends to implement at his own cost. These details shall include the following:

- (i) The name of the accredited training institution and programme
- (ii) The various aspects of each type of training comprised in the programme
- (iii) The manner in which the training is to be delivered
- (iv) The numbers and details of the trainers to be utilized.

Details of such additional skills training shall be attached to Form H of the forms to be completed by the Tenderer.

G3.4 <u>Additional training</u>

The Contractor shall be responsible for the provision of the following necessary for the delivery of the specified and additional skills training programme, including the following:

- (i) Sufficient skilled, competent and accredited trainers to deliver the additional training programme to workers in accordance with the training programme
- (ii) A suitably furnished venue
- (iii)) Transport of the workers as required

C.127 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (iv) Tools, equipment, and teaching aids
- (v) Stationery and all other necessary materials.

G3.5 Selection of candidates

Members of the workforce will be selected by the Employer's Agent, assisted by the Contractor and the Liaison Officer, to receive specific training as approved by the Employer's Agent.

- The following will be taken into account in the selection of the workers to receive the specified training:
 - (i) Previous experience (if any)
 - (ii) Previous courses completed (if any)
 - (iii) Module specific requirements.

G3.6 <u>Duration of training</u>

The Contractor shall allow in his programme for the selected members of the workforce to be engaged in the specified training modules.

 Provision must also be made by the Contractor for members of the workforce to receive any additional training as provided for by the Contractor.

G3.7 Training hours

All specified skills-related training shall take place only during normal working hours and the Contractor shall ensure that the selected workers are available at the appropriate times to undergo such training.

G3.8 Approval of training

Both the Selected Subcontractor's and the Contractor's additional training programme shall be subject to the approval of the Employer's Agent, and if so instructed by the Employer's Agent, the Contractor shall alter or amend the programme and course content to suit changing conditions on site and all changes in the Contractor's programme of work.

G3.9 Training record

The Contractor shall keep comprehensive records of the training given to each worker involved in training as well as the nature and number of each task executed by the worker and whenever required shall provide copies of such records to the Employer's Agent.

G3.10 Remuneration during training

C.128 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Workers shall be remunerated in respect of all time spent undergoing the specified training in terms of Clause D03.02, at the minimum specified wage rate for the area of the Works.

G3.11 Use of workers

The Contractor shall, in so far as it is reasonably feasible, take due cognizance of the nature of the works to be executed at any given time and use trained workers on those aspects of the works for which they have been trained.

G4 ENTREPRENEURIAL SKILLS TRAINING

G4.1 <u>Selection of Candidates</u>

Members from selected small, medium and micro enterprises employed by the Contractor as Subcontractors will be entitled to receive a structured training programme, comprising of training delivered by a Selected Subcontractor and any additional training as provided for by the Contractor, the training will comprise both management skills as well as business development skills.

G4.2 Performance and monitoring

The Contractor shall closely monitor the performance of all the Subcontractors in the execution of their contracts and shall identify all such Subcontractors who, in his opinion, display the potential to benefit from structured training as may be provided for elsewhere in the Contract and where required by the Employer's Agent, and shall make recommendations in this regard. The final list of candidates will be decided between the Contractor, the Employer's Agent and the Project Committee.

G4.3 Delivery of training

The Contractor shall assist in facilitating in the delivery of the training, by instructing and motivating the Subcontractor's regarding attendance and participation therein.

G4.4 **Programming of work and training**

The Contractor shall further make all reasonable efforts to co-ordinate the programming of the Subcontractor's work with that of the delivery of the structured training.

C.129 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

G4.5 <u>Training standards</u>

The entrepreneurial skills training programme to be implemented by the selected Subcontractor shall comply with the following minimum standards:

- (i) Be accredited by the Civil Engineering Industry Training Scheme (CEITS) or other institution recognised by the Department of Labour, as being appropriate for application on this project. Accredited training refers to both the trainers as well as to the training materials.
- (ii) Be delivered by suitably qualified and experienced trainers accredited to do so.

G4.6 Certificates

Following completion of the structured training, members of small, medium and micro Subcontractors that have demonstrated understanding of and competence in the training material are to be appropriately certified by the accrediting body.

G4.7 <u>In house training and additional training</u>

The Contractor shall provide with his tender, full details of any additional accredited and in-house training, viewed to be necessary by the Contractor, which he intends to implement at his own cost. These details shall include the following:

- (i) The name of the training institution and programme
- (ii) The various aspects of each type of training comprised in the programme
- (iii) The manner in which the training is to be delivered
- (iv) The numbers and details of the trainers to be utilized.

Details of such additional entrepreneurial training shall be attached to Form H of the forms to be completed by the Tenderer.

G4.8 <u>Provision of entrepreneurial training</u>

The Contractor shall be responsible for the provision of the following necessary for the delivery of the entrepreneurial training programme, including the following:

- (i) Sufficient skilled and competent trainers to deliver the additional training programme to trainees in accordance with the training programme
- (ii) A suitably furnished venue
- (iii) Transport of the trainees as required

C.130 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (iv) Tools, equipment, and teaching aids
- (v) Stationery and all other necessary materials.

G4.9 Training hours

All specified entrepreneurial training shall take place within normal working hours.

G4.10 Approval of training

Both the Selected Subcontractor's and the Contractor's training programme shall be subject to the approval of the Employer's Agent, and if so instructed by the Employer's Agent shall alter or amend the programme and course content.

G4.11 <u>Training records</u>

The Contractor shall keep comprehensive records of the training given to each Subcontractor involved in training and whenever required shall provide copies of such records to the Employer's Agent. At the successful completion of each course each Subcontractor shall be issued with a certificate indicating the course contents as proof of attendance and completion.

G4.12 Remuneration during training

No remuneration in respect of time spent undergoing specified training in terms of this clause will be made to any of the Subcontractors.

G5 MEASUREMENT AND PAYMENT

G5.1 <u>Basic principles</u>

a) General

Measurement and payment for all work executed in terms of this contract shall be measured and paid for in accordance with the principles set out in Clause B1232 of the Construction Specifications, irrespective of whether the work is executed as an integral part of the provision of training in terms of this specification.

b) **T**raining

The Contractor shall only be reimbursed for the amounts actually paid by the Contractor to the Selected Subcontractors as appointed by the Employer, in



C.131 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

execution of the Employer's Agent's written instruction, plus a percentage as tendered to cover all his charges and profits.

G5.2 Scheduled items

Payment items are included in the bill of Quantities under Section 1200 for the provision of the specified training by selected Subcontractors only. Any additional training as viewed by the Contractor to be necessary shall be viewed to be included under Section 1300 and shall not be paid for separately.



C.132 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C4 SITE INFORMATION

C.133 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

SITE INFORMATION

C4.1 LOCALITY PLAN

The project is located in Ga-Moloi in, Makhuduthamaga Local Municipality within the Sekhukhune District Municipality of Limpopo Province.

1.1 <u>Documentation</u>

The documentation included in this section describes the site as at the time of tender to enable the Tenderer to price his tender, furthermore to decide upon his method of working and programming and to evaluate his risks.

1.2 <u>Information</u>

Only actual information about physical conditions of the site and its surroundings (if any available) is included in this Site Information and interpretation thereof is a matter for the Tenderer.

C4.2 <u>SITE INFORMATION</u>

2.1 Records and Test Results

1.1.1 Geotechnical Report

The Geotechnical Report is available and can be obtained upon request.



C.134 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C5 ANNEXURES



C.135 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

PART C5: ANNEXURES

C5.1	PRO-FORMA DOCUMENTS	
C5.2	GUIDELINES FOR THE IMPLEMENTATION OF LABOUR-INT INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PPROGRAMME (EPWP)	UBLIC WORKS
C5.3	TENDER DRAWINGS	C.178
C5.4	OCCUPATIONAL HEALTH & SAFETY POLICY	C.179

C.136 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C5.1 PRO-FORMA DOCUMENTS

The following is a list of pro-forma documents and examples that are required to be completed by the successful tenderer.

C5.1.1	RETENTION MONEY GUARANTEE PROFORMA	C.137
C5.1.2	EXAMPLE OF ABE DECLARATION AFFIDAVIT	C.139
C5.1.3	FORM RDP 9(E): CONTRACT EMPLOYMENT REPORT	C.142
C5.1.4	FORM RDP 10(E): EMPLOYMENT OF SUPERVISORY STAFF REPORT	<u>T</u> C.144
C5.1.5	FORM RDP 11(E): GENERIC TRAINING REPORT	C.145
C5.1.6	FORM RDP 12(E): ENTREPRENEURIAL TRAINING REPORT	C.146
C5.1.7	FORM RDP 13(E): EMPLOYER'S AGENTING TRAINING REPORT	C.147
C5.1.8	FORM RDP 14(E): COMMUNITY LIAISON MEETING REPORT	C.148



C.137 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Tenderer

C5.1.1 RETENTION MONEY GUARANTEE PRO-FORMA EXAMPLE

CONTRACT No.: LIM473/MATHOUSAND-R&B/23/24/023

immediately upon receipt of a written demand from you.

Makhuduthamaga Municipality

Private Bag X 434

This Guarantee is not to completed and signed by the Guarantor.

A separate form will be issued to the successful

Notes to Tenderer

- 1. This pro forma is for information only. The successful tenderer's guarantor will need to reproduce it without amendment, omission or addition for completion and lodgement with the Employer.
- 2. The tenderer's guarantee will have to be on letterheads indicating the contact details of the guarantor, shareholders/board of directors, guarantee number and the company registration number.

undertake to pay you such amounts as you may from time to time demand from us,



C.138 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

1	Each demand shall be in writing a other address as we shall in writing		s at	such
2.	Our liability to make the payment not be affected or diminished by you and the Contractor.			
3.	Our aggregate liability under this	guarantee is lim	ited to	
	(R) and	is restricted to p	ayment of monies	only.
4.	This guarantee shall expire on the which but for this guarantee would to the Contractor.			
5.	This guarantee is neither negotial against final payment of our aggreguarantee in terms of Clause 4 (a	egate liability or	on the date of the	
•	for	and	on	behalf
on this the	e day of	in the y	ear	
GUARANT	ГОR:			
AS WITNE	ESS:			
		2		
	nt):	NAME(Print):		
ADDRESS	3	ADDRESS		



C.139 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C5.1	I.2 EXAMPLE OF ABE DE	CLARATION	AFFIDAVIT
	(facsimiles w	vill be provided	d by the Employer to be completed by ABEs)
1.	Name of firm	:	
	Postal address	:	
	Telephone no.	:	Fax no
	Contact person	:	
	VAT registration no.	:	
2.	Type of firm (tick as appropr	riate)	
3.	 Partnership	e trader ration no o	
_	•		
 4. 5. 	Participation in this contract		ntract:
	- as a Sub-contractor		Yes/No
	- in a Joint Venture		Yes/No
	- with main contractor		Yes/No
	- with a sub-contractor		Yes/No
6.	List all partners, proprietors	and shareho	olders:

Name	ID. No.	Citizen of RSA Yes/No	PDI status Yes/No	%owned

7. List the last four contracts/assignments completed by your firm. If required, a separate sheet may be used and attached to this page. Reference may be called from the Employers of the projects listed.



C.140 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

PROJECT AND WORK PERFORMED	EMPLOYER (NAME, ADDRESS, TEL, FAX)	VALUE OF RANDS
Notes to tenderer:		
	te the assignment or contra f rural roads) and follow this v pipe culverts).	
	as a sub-contract give the requ also of the Contractor who empl	
		1161 \ 1 1 1

Under column 3 give the value of the main contract (if any and if known) and also the value of the work carried out by you.

8. Declaration

authorised to sign	being duly on behalf of the firm, affirm that the PDI equity in this business is as stated in information furnished is true and correct.
Signature	
Name (print)	
Date	
Signed on behalf of	(print name)
Address	
Telephone no.	



C.141 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS **TO MARAGANENG**

Commissioner	of Oath
Date	of a Company a cortificate of outbority for cignotory must be provided

Note: In the case of a Company a certificate of authority for signatory must be provided

C.142

MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

EXAMPLE

FORM RDP 9(E): CONTRACT EMPLOYMENT REPORT C5.1.3

CONTRACT NO.....

		REPORT ON EMPLOYMENT	EMPLOYME		ABOVE CON	TRACT FOR I	ON THE ABOVE CONTRACT FOR THE MONTH OF 2023	= 2023		
NAME OF	AGE OF	EMPLOYMENT				EMI	EMPLOYMENT			
OR	OR FIRM	0000	MALE	FEMALE	TOTAL	Ь	PERSON/HOURS	S	VALU	VALUE (RAND)
VENDOR						MALE	FEMALE	TOTAL	MALE	FEMALE
		Unskilled (US)								
		Semi-Skilled (SS)								
		Skilled (SK)								
		Lab.Tech (LT)								
		Surveyor (SUR)								
		Eng. Tech (ET)								
		Employer's Agent (EN)								



C.143 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

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CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

	GRAND TOTALS			
	TOTALS			ı
				ı
			Others (o)	
			Admin (AD)	1

C.144 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

EXAMPLE

C5.1.4 FORM RDP 10(E): EMPLOYMENT OF SUPERVISORY STAFF REPORT

CONTRACT NO.....

REPORT ON THE EMPLOYMENT C	REPORT ON THE EMPLOYMENT OF SUPERVISORY STAFF ON THE ABOVE CONTRACT FOR THE MONTH OF	SOVE CONTRACT FOR THE MON	тн оғ	2023
POSITION HELD	NAME	IOA	IQd-NON	TOTAL
Site Agent				
Senior Materials Technician				
Senior Surveyor				
Earthworks Surveyor				
Compaction Supervisor				
Surfacing Supervisor				
Structures Supervisor				
Others: - List				
	TOTALS			



C.145 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

EXAMPLE

C5.1.5 FORM RDP 11(E): GENERIC TRAINING REPORT

CONTRACT NO.....

			r e	1	<u> </u>	<u> </u>	<u> </u>	_
2023	FOTAL COST OF	TYPE OF TRAINING	FEMALE					
	TOTAL	TYI TYI	MALE					
		CERTIFICATES AWARDED	FEMALE					
NTH OF	ATTENDANCES	CERTI AW	MALE					
REPORT ON GENERIC TRAINING ON THE ABOVE CONTRACT FOR THE MONTH OF 2023		NUMBER ATTENDING	FEMALE					TOTAL
		NUM ATTE	MALE					
	NAME OF TRAINING	HOUSE WRITE IH						
	TRAINEE		VENDOR NO.					
	EMPLOYER OF TRAINEE		NAME					
	DATES OF	COURSES	FINISH					
	DATI	COU	START					

TOTAL ALL TRAINEES

C.146 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023



CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

EXAMPLE

C5.1.6 FORM RDP 12(E): ENTREPRENEURIAL TRAINING REPORT

CONTRACT NO.....

	TOTAL COST OF TRAINING PER TYPE OF TRAINING		FEMALE		
REPORT ON ENTREPRENEURIAL TRAINING ON THE ABOVE CONTRACT FOR THE MONTH OF 2023	TOTAL	TYI TRA	MALE		
		CERTIFICATES AWARDED	FEMALE		
	ATTENDANCES	CERTII	MALE		
		NUMBER ATTENDING	FEMALE		
		NUI	MALE		
	NAME OF TRAINING	HOUSE WRITE IH			
	EMPLOYER OF TRAINEE		VENDOR NO.		
			NAME		
	ES OF	RSES	FINISH		
	DATES OF TRAINING COURSES		START		



C.147 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

EXAMPLE

C5.1.7 FORM RDP 13(E): EMPLOYER'S AGENTING TRAINING REPORT

CONTRACT NO.....

REPORT ON EMPLOYER'S AGENTING TRAINING ON THE ABOVE CONTRACT FOR THE MONTH OF 2023	TOTAL COST OF	OF TRAINING	FEMALE			
	TOT	I KAIIN OF	MALE			
		CERTIFICATES AWARDED	FEMALE			TOTAL
	ATTENDANCES	CERTI AW	MALE			
		NUMBER ATTENDING	MALE FEMALE MALE			
	NUN ATTE		MALE			
	NAME OF TRAINING	HOUSE WRITE - IH				
	TRAINEE		VENDOR NO.			
	EMPLOYER OF TRAINEE		NAME			
	DATES OF	COURSES	FINISH			
	DATE	COU	START			

TOTAL ALL TRAINEES

C.148 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023



CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

EXAMPLE

C5.1.8 FORM RDP 14(E): COMMUNITY LIAISON MEETING REPORT

CONTRACT NO.....

EETINGS ON THE ABOVE CONTRACT FOR THE MONTH OF 2023	COMMENTS					
	TOTAL COST OF	MEETING				
	DURATION OF MEETING (hours)					
ON THE ABOVE COI	NUMBER OF COMMUNITY MEMBERS PRESENT					
	SATION HE MEETING	VENDOR NO.				
REPORT ON COMMUNITY LIAISON M	COMPANY/FIRM OR ORGANISATION RESPONSIBLE FOR ARRANGING THE MEETING	NAME				
	DATE OF MEETING	1				

C.149

MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

CONTRACT NO.....

REPORT ON COMMUNITY LIAISON MEETINGS ON THE ABOVE CONTRACT FOR THE MONTH OF 2005	COMMENTS					
	TOTAL COST OF	MEETING				
	DURATION OF	(hours)				
	NUMBER OF COMMUNITY MEMBERS PRESENT					
	ATION HE MEETING	VENDOR NO.				
	COMPANY/FIRM OR ORGANISATION RESPONSIBLE FOR ARRANGING THE MEETING	NAME				
	DATE OF MEETING					



C.150 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C5.2 GUIDELINES FOR THE IMPLEMENTATION OF LABOUR-INTENSIVE INFRASTRUCTURE PROJECTS UNDER THE EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

TABLE OF CONTENTS

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TERMINOLOGY

ABBREVIATIONS

- 1 INTRODUCTION
- 2 RESPONSIBILITIES OF THE PUBLIC BODY
- 2.1 Selection of projects
- 2.2 Setting of rate of pay
- 2.3 Appointment of consulting Employer's Agents and contractors
- 3 Contract Documentation for Consulting Employer's Agents and Contractors for Labourintensive construction projects
- 3.1 General
- 3.2 Contract Documentation for Consulting Employer's Agenting Services
- 3.3 Contract Documentation for the Works
 - 3.3.1 Conditions of tender
 - 3.3.2 Conditions of contract
 - 3.3.3 Scope of work
 - 3.3.4 Schedules of quantities
- **4 DESIGN CHECKLIST**

C.151 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Foreword

The Expanded Public Works Programme (EPWP) is one of government's short-to-medium term programmes aimed at alleviating and reducing unemployment. The EPWP will achieve this aim through the provision of work opportunities coupled with training. It is a national programme covering all spheres of government and state-owned enterprises (SOE's). President Mbeki formally announced the programme in his State of the Nation Address in February 2003.

Government's medium-to-long term programmes to address unemployment include increasing economic growth, improving skills levels through education and training, and improving the enabling environment for industry to flourish. The EPWP will continue to exist until these medium-to-long term programmes are successful in reducing unemployment.

The programme involves reorientating line function budgets so that government expenditure results in more work opportunities, particularly for unskilled labour. EPWP projects will therefore be funded through the normal budgetary process, through the budgets of line-function departments, provinces and municipalities.

Opportunities for implementing the EPWP have been identified in the infrastructure, environmental, social and economic sectors. In the infrastructure sector the emphasis is on creating additional work opportunities through the introduction of labour-intensive construction methods. Labour-intensive construction methods involve the use of an appropriate mix of labour and machines, with a preference for labour where technically and economically feasible, without compromising the quality of the product.

All public bodies involved in infrastructure provision are expected to attempt to contribute to the programme. As part of this initiative, the national government has through the 2004 Division of Revenue Act placed some additional conditionalities on the Provincial Infrastructure Grant (PIG) and the Municipal Infrastructure Grant (MIG). These additional conditionalities will require provinces and municipalities to use the "Guidelines for the implementation of labour-intensive infrastructure projects under the EPWP" agreed upon between SALGA, National Treasury and the Department of Public Works for identification, design and construction or projects financed through the MIG or PIG. This document contains those guidelines.

International and local experience has shown that, with well-trained supervisory staff and an appropriate employment framework, labour-intensive methods can be used successfully for infrastructure projects involving low-volume roads and sidewalks, stormwater drains, and trenches. On the basis of this experience, and in the context of high levels of unemployment, the national government has decided to require that these infrastructure projects must be carried out labour-intensively.

These guidelines aim to provide provinces and municipalities with the necessary tools to successfully tender these projects as labour-intensive projects. These guidelines have been designed with the aim of minimising the additional work required from provincial and

C.152 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

municipal officials. The National Department of Public Works is working with the Construction Education and Training Authority (CETA) to develop the capacity of the construction industry to design and manage labour-intensive infrastructure projects successfully.

The guidelines contain sections which should be copied into the relevant parts of the contract documentation for consulting Employer's Agents and contractors. These sections introduce a requirement that certain construction activities must be carried out by hand, under certain conditions. These requirements were formulated on the basis of a thorough review of international and local experience of labour-intensive construction, in order to identify the activities for which it is economically and technically feasible to use labour-intensive methods. The guidelines therefore conform to the Public Finance Management Act requirement for assessing the cost-effectiveness of capital projects. The normal tender evaluation processes are followed under these guidelines, and it is not necessary to apply any special additional preferences for employment creation.

The guidelines include the contents of the Code of Good Practice for Special Public Works Programmes, which has been gazetted by the Department of Labour, and which provides for special conditions of employment for these EPWP projects. In terms of the Code of Good Practice, the workers on these projects are entitled to formal training, which will be provided by training providers appointed (and funded) by the Department of Labour. For projects of up to six months in duration, this training will cover life-skills and information about other education, training, and employment opportunities.

In order to develop the capacity of the construction industry to manage labour-intensive projects, these guidelines also include an eligibility requirement for the appointment of contractors and consulting Employer's Agents, i.e. that their key staff involved in the project must undergo special NQF-accredited training programmes in labour-intensive construction.

As an additional means of addressing the capacity in the labour-intensive construction sector, DPW together with the CETA has established a labour intensive contractor learnership programme. The aim of this learnership programme is to produce small contractors qualified to execute work in accordance with these guidelines. The CETA is paying for the classroom training of these contractors.

As part of this learnership programme, learner contractors need to execute projects to gain practical experience. Partnering provinces and municipalities may allocate projects identified and designed using these guidelines to the learner contractors on a negotiated price basis.

An electronic version of these guidelines and electronic copies of the following documents can be obtained on the enclosed CD ROM or downloaded from www.publicworks.gov.za.

- Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes
- Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997by the Minister of Labour in Government



C.153 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Notice N° R63 of 25 January 2002

- Government Gazette (DORA 2004 with MIG and PIG Conditions)
- Documents relating on the Labour-Intensive Contractor Learnership Programme

C.154 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Terminology

By hand: refers to the use of tools which are manually operated and powered

Form of contract: refers to a document (conditions of contract) published by industry which establishes the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the contract.

Labour-intensive: refers to methods of construction involving a mix of machines and labour, where labour, utilising hand tools and light plant and equipment, is preferred to the use of heavy machines, where technically and economically feasible.

(Note: The normal emphasis on the cost-effectiveness and quality of the asset must be retained.)

Public body: refers to a department, trading entity, constitutional institution, municipality, public entity or municipal entity

Scope of work: refers to a specification and description of the services or construction works which are to be provided and any other requirements and constraints relating to the manner in which the contract is to be performed

Abbreviations

CETA: Construction Education and Training Authority

CIDB: Construction Industry Development Board

ECSA: Employer's Agenting Council of South Africa

EPWP: Expanded Public Works Programme

FIDIC: French acronym for the International Federation of Consulting Employer's Agents

NEC: New Employer's Agenting Contract

NQF: National Qualifications Framework

SANS: South African National Standard

SPWP: Special Public Works Programme

C.155 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

1 INTRODUCTION

Labour-intensive infrastructure projects under the EPWP include:

- using labour-intensive construction methods to provide employment opportunities to local unemployed people;
- providing training or skills development to those locally employed workers;
- building cost-effective and quality assets.

This document is a guiding framework for the implementation of labour-intensive projects under the Expanded Public Works Programme. It provides the means by which labour-intensive works can be implemented under the most commonly encountered delivery model, namely design by employer (i.e. the model in which the contractor undertakes construction on the basis of full designs issued by the employer.) It also assumes that the public body will appoint a consultant to design the works and to administer the contract. Adjustments to the text of this document will be necessary to accommodate other delivery models. Where no consultants are appointed, the staff of the public body needs to perform the activities assigned to consultants in this document.

The document in addition provides guidance on the:

- identification of suitable projects;
- appropriate design for labour-intensive construction;
- the specification of labour-intensive works; and
- the compilation of contract documentation for labour-intensive projects.

Specific direction is given regarding contract clauses which must be included to amend or augment standard documentation, in order to implement labour-intensive projects.

These guidelines do not have to be applied to projects for which planning had already commenced before the beginning of the 2004-2005 financial year, as it might require too many changes to existing designs or tender documentation. However, these guidelines must be applied to all relevant projects for which the design process commences after the beginning of the 2004-2005 financial year.

Appendix A provides sources of additional information.

The employment of locally employed temporary workers on all EPWP labour-intensive infrastructure projects must be in accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes issued in terms of the Basic Conditions of Employment Act, 1997 (Act N° 75 of 1997) and promulgated in Government Gazettes Notice N° P64 of 25 January 2002. The requirements of this Code have been included in this Guidelines document. However, reference should be made to the full text of the Code of Good Practice and the related Ministerial Determination.

C.156 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

2. RESPONSIBILITIES OF THE PUBLIC BODY

2.1 Selection of projects

The public body must implement the following types of civil infrastructure projects labourintensively, in accordance with these guidelines:

- low-volume roads (typically less than 500 vehicles per day) and sidewalks;
- stormwater drainage; and
- trenching;

where such projects contain a significant amount of the construction activities for which the use of labour is specified in the Generic Labour-Intensive Specification in section 3.3.3 below, i.e. excavation, loading, short-distance hauling, offloading, spreading, grassing, and stone-pitching.

There is also potential for additional employment creation in other types of infrastructure and building (see Annexure B). Public bodies are also encouraged to create additional work opportunities in these projects. These guidelines may be used for other labour-intensive projects other than those types of civil infrastructure projects specified above, as long as such projects involve a significant substitution of labour for machines.

The public body must be satisfied that sufficient local labour (willing to work) is available for the project, before proceeding with the project as a labour-intensive project.

The public body is encouraged to send its relevant managers on the applicable skills programmes in labour-intensive construction (See Appendix D).

As mentioned in section 1 of these guidelines above, these guidelines do not have to be applied to projects for which planning had already commenced before the beginning of the 2004-2005 financial year, to avoid reworking existing designs or tender documentation.

2.2 Setting of rate of pay

In accordance with the Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes (clause 10.4), the public body must set a rate of pay (task-rate) for workers to be employed on the labour-intensive projects.

Clause 10.4 requires that the following should be considered when setting rates of pay for workers:

- 10.4.1 The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.
- 10.4.2 The rate should be an appropriate wage to offer an incentive for work, to reward effort

C.157 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

provided and to ensure a reasonable quality of work. It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.

- 10.4.3 Men, women, disabled persons and the aged must receive the same pay for work of equal value.
- 2.3 Appointment of consulting Employer's Agents and contractors

The public body must ensure that:

- i) the design of the labour-intensive works by consultants is overseen by persons in their employ who have completed the necessary skills training (see Appendix D);
- ii) works contracts are administered by persons in the employ of consultants who have completed the necessary skills training (see Appendix D); and
- ii) works contracts are awarded to contractors who have in their employ managers who have completed the necessary skills training (see Appendix D).

As a concession up to 30 June 2007, persons identified in Appendix D who have not completed the requisite skills training need only to be registered on the relevant skills programmes.

3 CONTRACT DOCUMENTATION FOR CONSULTING EMPLOYER'S AGENTS AND CONTRACTORS FOR LABOUR-INTENSIVE CONSTRUCTION PROJECTS

3.1 General

All standard forms of contract applicable in South Africa (see Appendix C) may be used for labour-intensive projects. It is not necessary to create special new forms of contract or to amend existing forms to implement labour-based works.

Requirements for labour-intensive works need, however, to be established in the scope of work / specifications / schedules / works information / scope of services / scope associated with a contract for both consultants and contractors.

Each standard form of contract uses different terms to describe the parties to the contract and to establish requirements for the works (see Appendix C). These guidelines use the terms employer and contractor for the parties engaged in construction works, client and consultant for the parties engaged in professional service contracts and scope of work for requirements in both professional service and construction contracts. The terms used in the text in boxes may have to be adjusted to reflect the terms used in the particular standard form of contract.

C.158 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

3.2 Contract Documentation for Consulting Employer's Agenting Services

The scope of work must establish the manner in which the consultant is to provide the consulting Employer's Agenting services associated with labour-intensive works.

The following must be included in the scope of work in the contract of employment with a Consulting Employer's Agent:

General

The services shall be provided in accordance with the provisions of the Guideline Scope of Service and Tariff of Fees for Persons Registered in terms of the Employer's Agenting Professions Act published by the Employer's Agenting Council of South Africa in terms of Board Notice No 18 of 2003 in Government Gazette No 24938, 28 February 2003).

Labour-intensive works

- 1. The Consultant shall not perform any significant portion of a project involving labour-intensive works under the direction of a staff member who has not completed, or, for the period 1 April 2004 to 30 July 2005, is not registered for training towards, the NQF level 7 unit standard "Develop and Promote Labour Intensive Construction Strategies" (Details of this skills programmes may be obtained from the CETA ETQA manager (e-mail:gerard@ceta.co.za, tel: 011-265 5900).
- 2. The staff member of the consultant who is responsible for the administration of any works contract involving labour-intensive works must have completed or, for the period 1 April 2004 to 30 July 2005, be registered for training towards, the NQF level 5 unit standard "Manage Labour-Intensive Construction Projects" (Details of this skills programmes may be obtained from the CETA ETQA manager (e-mail:gerard@ceta.co.za, tel: 011-265 5900).
- 3. The Consultant must provide the Client with satisfactory evidence that staff members satisfy the requirements of 1 and 2.
- 4. The Consultant must design and implement the construction works in accordance with the Guidelines for the Implementation of the Labour-Intensive Projects under the Expanded Public Works Programme (the Guidelines) published by the national Department of Public Works.
- 5. The Consultant shall for monitoring purposes, transmit to the Client data obtained from the contractor on the number of people employed, broken down into the amounts spent on women, youth, and persons with disability on the project, the number of person days of employment created and the number of days of formal training

C.159 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

provided.

- 6. All services relating to the implementation of the works which are to be provided in terms of the Guidelines are normal services in terms of ECSA's Board Notice No 18 of 2003. Any changes in the design of the works to incorporate labour intensive works shall not constitute a change in scope or an additional service.
- 7. The Consultant shall certify that the works have been completed in accordance with the requirements of the Guidelines and the Contract:
 - a) whenever a payment certificate is presented to the Client for payment; and
 - b) immediately after the issuing of a practical completion certificate that signifies that the whole of the works have reached a state of readiness for occupation or use for the purposes intended although some minor work may be outstanding.

3.3 Contract Documentation for the Works

3.3.1 Conditions of tender

Public bodies must only award contracts to contractors who have suitably qualified senior and middle supervisory staff to supervise the labour-intensive works. Tenderers must be made aware of this requirement in tender documents. Those responsible for evaluating tenders must confirm that the contractor has such staff available for the contract during the tender evaluation process.

The following must be included in the tender data / conditions of tender in the contract with the Employer:

Eligibility requirements

A contract will only be entered into with a tenderer who has in his employ management and supervisory staff satisfying the requirements of the scope of work for labour intensive competencies for supervisory and management staff.

Information to be submitted with the tender

The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

3.3.2 Conditions of contract

As mentioned in 3.1, any standard form of contract for construction works may be used for labour-intensive projects (see Appendix C). These forms of contract must not, however, be

C.160 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

amended or varied to alter the obligations, liabilities or rights of the employer, representative of the employer (Employer's Agent / principal agent / agent / project manager) or contractor where a project manager, materials manager, trainer, mentor or any other person is appointed to support the Contractor.

The following must be included in the contract data / special conditions of contract in the contract with the Employer:

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the scope of work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

Applicable labour laws

The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice N° R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour intensive and which are undertaken by unskilled or semi-skilled workers.

1 Introduction

- 1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.
- 1.2 In this document -
 - (a) "department" means any department of the State, implementing agent or contractor;
 - (b) "employer" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;
 - (c) "worker" means any person working in an elementary occupation on a SPWP;
 - (d) "elementary occupation" means any occupation involving unskilled or semiskilled work;
 - (e) "management" means any person employed by a department or implementing agency to administer or execute an SPWP;
 - (f) "task" means a fixed quantity of work;
 - (g) "task-based work" means work in which a worker is paid a fixed rate for performing a task;
 - (h) "task-rated worker" means a worker paid on the basis of the number of tasks completed;

C.161 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

(i) "time-rated worker" means a worker paid on the basis of the length of time worked.

2 Terms of Work

- 2.1 Workers on a SPWP are employed on a temporary basis.
- 2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.
- 2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3 Normal Hours of Work

- 3.1 An employer may not set tasks or hours of work that require a worker to work-
 - (a) more than forty hours in any week
 - (b) on more than five days in any week; and
 - (c) for more than eight hours on any day.
- 3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
- 3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4 Meal Breaks

- 4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 4.2 An employer and worker may agree on longer meal breaks.
- 4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
- 4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5 Special Conditions for Security Guards

- 5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.
- 5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6 Daily Rest Period

C.162 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7 Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8 Work on Sundays and Public Holidays

- 8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.
- 8.2 Work on Sundays is paid at the ordinary rate of pay.
- 8.3 A task-rated worker who works on a public holiday must be paid
 - (a) the worker's daily task rate, if the worker works for less than four hours;
 - (b) double the worker's daily task rate, if the worker works for more than four hours.
- 8.4 A time-rated worker who works on a public holiday must be paid
 - (a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;
 - (b) double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday

9 Sick Leave

- 9.1 Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
- 9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.
- 9.3 A worker may accumulate a maximum of twelve days' sick leave in a year.
- 9.4 Accumulated sick-leave may not be transferred from one contract to another contract.
- 9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- 9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
- 9.7 An employer must pay a worker sick pay on the worker's usual payday.
- 9.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is
 - (a) absent from work for more than two consecutive days; or

C.163 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (b) absent from work on more than two occasions in any eight-week period.
- 9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- 9.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

10 Maternity Leave

- 10.1 A worker may take up to four consecutive months' unpaid maternity leave.
- 10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
- 10.5 A worker may begin maternity leave
 - (a) four weeks before the expected date of birth; or
 - (b) on an earlier date -
 - (i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - (ii) if agreed to between employer and worker; or
 - (c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- 10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
- 10.7 A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

11 Family responsibility leave

- 11.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -
 - (a) when the employee's child is born;
 - (b) when the employee's child is sick;

C.164 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- (c) in the event of a death of -
 - (i) the employee's spouse or life partner;
 - (ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

12 Statement of Conditions

- 12.1 An employer must give a worker a statement containing the following details at the start of employment
 - (a) the employer's name and address and the name of the SPWP;
 - (b) the tasks or job that the worker is to perform; and
 - (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
 - (d) the worker's rate of pay and how this is to be calculated;
 - (e) the training that the worker will receive during the SPWP.
- 12.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
- 12.3 An employer must supply each worker with a copy of these conditions of employment.

13 Keeping Records

- 13.1 Every employer must keep a written record of at least the following
 - (a) the worker's name and position;
 - (b) in the case of a task-rated worker, the number of tasks completed by the worker;
 - (c) in the case of a time-rated worker, the time worked by the worker;
 - (d) payments made to each worker.
- 13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

- 14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
- 14.2 A task-rated worker will only be paid for tasks that have been completed.
- 14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

C.165 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- 14.4 A time-rated worker will be paid at the end of each month.
- 14.5 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- 14.6 Payment in cash or by cheque must take place
 - (a) at the workplace or at a place agreed to by the worker;
 - (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
 - (c) in a sealed envelope which becomes the property of the worker.
- 14.7 An employer must give a worker the following information in writing
 - (a) the period for which payment is made;
 - (b) the numbers of tasks completed or hours worked;
 - (c) the worker's earnings;
 - (d) any money deducted from the payment;
 - (e) the actual amount paid to the worker.
- 14.8 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it 14.9 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

15 Deductions

- 15.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
- 15.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
- 15.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
- 15.4 An employer may not require or allow a worker to
 - (a) repay any payment except an overpayment previously made by the employer by mistake;
 - (b) state that the worker received a greater amount of money than the employer actually paid to the worker; or
 - (c) pay the employer or any other person for having been employed.

16 Health and Safety

16.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

C.166 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

16.2 A worker must –

- (a) work in a way that does not endanger his/her health and safety or that of any other person;
- (b) obey any health and safety instruction;
- (c) obey all health and safety rules of the SPWP;
- (d) use any personal protective equipment or clothing issued by the employer;
- (e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

17 Compensation for Injuries and Diseases

- 17.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- 17.2 A worker must report any work-related injury or occupational disease to their employer or manager.
- 17.3 The employer must report the accident or disease to the Compensation Commissioner.
- 17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

18 Termination

- 18.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.
- 18.2 A worker will not receive severance pay on termination.
- 18.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
- 18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
- 18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.



C.167 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

19 Certificate of Service

- 19.1 On termination of employment, a worker is entitled to a certificate stating
 - (a) the worker's full name;
 - (b) the name and address of the employer;
 - (c) the SPWP on which the worker worked;
 - (d) the work performed by the worker;
 - (e) any training received by the worker as part of the SPWP;
 - (f) the period for which the worker worked on the SPWP;
 - (g) any other information agreed on by the employer and worker.

3.3.3 Scope of work

Standard specifications (those normally used by the public bodies) are to be utilised. It is necessary, however, to include certain requirements in the scope of work to implement labour-intensive works in accordance with the provisions of these Guidelines.

C.168 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

The following wording, as appropriate, must be included in the scope of work in the contract with the contractor

DESCRIPTION OF THE WORKS

Employer's objectives

The employer's objectives are to deliver public infrastructure using labour-intensive methods Labour-intensive works.

Labour-intensive works comprise the activities described in the Labour-Intensive Specification. Such works shall be constructed using local workers who are temporarily employed in terms of this scope of work.

LABOUR-INTENSIVE COMPETENCIES OF SUPERVISORY AND MANAGEMENT STAFF

Established contractors shall only engage supervisory and management staff in labour intensive works who have either completed, or for the period 1 April 2004 to 30 June 2005, are registered for training towards, the skills programme outlined in Table 1.

Emerging contractors shall have personally completed, or for the period 1 April 2004 to 30 June 2005 be registered on a skills programme for the NQF level 2 unit standard. All other site supervisory staff in the employ of emerging contractors must have completed, or for the period 1 April 2004 to 30 June 2005 be registered on a skills programme for, the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	nnel NQF level Unit		Unit standard titles	Skills programme description	
Team supervisor	leader/	2	Apply Labour-Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, and	
			Use Labour-Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage		
			Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	any one of these 3 unit standards	
			Use Labour-Intensive Construction		



C.169 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

		Methods to Construct, Repair and Maintain Structures	
Foreman/supervisor	4	Implement Labour-Intensive Construction Systems and Techniques	This unit standard must be completed, and
		Use Labour-Intensive Construction Methods to Construct and Maintain Roads and Stormwater Drainage	
		Use Labour-Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	any one of these 3 unit standards
		Use Labour-Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent/Manager (i.e the contractor's most senior representative that is resident on the site)	5	Manage Labour-Intensive Construction Processes	Skills Programme against this single unit standard
Details of these skills programmes may be obtained from the CETA ETQA manager (e-mail:gerard@ceta.co.za, tel: 011-265 5900)			

EMPLOYMENT OF UNSKILLED ANDSEMI-SKILLED WORKERS IN LABOUR INTENSIVE WORKS

- 1.1 Requirements for the sourcing and engagement of labour.
- 1.1.1 Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.
- 1.1.2 The rate of pay set for the SPWP is R per task or per day.

(Insert value determined by public body in terms of clause 2.2 of these Guidelines)

- 1.1.3 Tasks established by the contractor must be such that:
 - a) the average worker completes 5 tasks per week in 40 hours or less; and
 - b) the weakest worker completes 5 tasks per week in 55 hours or less.
- 1.1.4 The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.5 The Contractor shall, through all available community structures, inform the local

C.170 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

- a) where the head of the household has less than a primary school education;
- b) that have less than one full time person earning an income;
- c) where subsistence agriculture is the source of income.
- d) those who are not in receipt of any social security pension income
- 1.1.6 The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:
 - a) 60 % women;
 - b) 20% youth who are between the ages of 18 and 25; and
 - c) 2% on persons with disabilities.

1.2 Specific provisions pertaining to SANS 1914-5

1.2.1 Definitions

Targeted labour: Unemployed persons who are employed as local labour on the project.

1.2.3 Contract participation goals

- 1.2.3.1 There is no specified contract participation goal for the contract. The contract participation goal shall be measured in the performance of the contract to enable the employment provided to targeted labour to be quantified.
- 1.2.3.2 The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

1.2.4 Terms and conditions for the engagement of targeted labour

Further to the provisions of clause 3.3.2 of SANS 1914-5, written contracts shall be entered into with targeted labour.

1.2.5 Variations to SANS 1914-5

1.2.5.1 The definition for net amount shall be amended as follows:

Financial value of the contract upon completion, exclusive of any value added tax or sales tax which the law requires the employer to pay the contractor.

1.2.5.2 The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

C.171 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

1.3 Training of targeted labour

- 1.3.1 The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
- 1.3.2 The cost of the formal training of targeted labour, will be funded by the local office of the Department of Labour. This training will take place as close to the project site as practically possible. The contractor must access this training by informing the relevant regional office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The Employer and the Department of Public Works (Fax: 012 3258625/ EPWP Unit, Private Bag X65, Pretoria 0001) must be furnished with a copy of this request.
- 1.3.3 The contractor shall do nothing to dissuade targeted labour from participating in training programmes and shall take all reasonable steps to ensure that each beneficiary is provided with two days of formal training for every 22 days worked.
- 1.3.4 An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of 1.3.3 above.
- 1.3.5 Proof of compliance with the requirements of 1.3.2 to 1.3.4 must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

GENERIC LABOUR-INTENSIVE SPECIFICATION

(This specification must be incorporated in the Scope of Works without amendment or modification. When SANS 1921-5, Construction and management requirements for works contracts Part 5: Earthworks activities which are to be performed by hand, is published, the earthworks portions of this generic specification must be replaced with a reference to SANS 1921-5 and its associated specification data)

Scope

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) trenches having a depth of less than 1.5 metres
- b) stormwater drainage
- c) low-volume roads and sidewalks

Precedence

Where this specification is in conflict with any other standard or specification referred to in the Scope of Works to this Contract, the requirements of this specification shall prevail.

Hand excavatable material

C.172 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

Hand excavatable material is material:

a) granular materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very loose, loose, medium dense, or dense; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

b) cohesive materials:

- i) whose consistency when profiled may in terms of table 1 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii) where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;
- Note: 1) A boulder, a cobble and gravel is material with a particle size greater than 200mm, between 60 and 200mm.
 - 2) A dynamic cone penetrometer is an instrument used to measure the insitu shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used.

Table 1: Consistency of materials when profiled

GRANULAR MATERIALS		COHESIVE MATERIALS		
Consistency	Description	Consistency	Description	
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.	
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.	
Medium dense	Considerable resistance to penetration by sharp end of	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10	



C.173 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

	a geological pick.		mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb- nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

Trench excavation

All hand excavatable material in trenches having a depth of less than 1,5 metres shall be excavated by hand.

Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers a) to 90% Proctor density;

- b) such that in excess of 5 blows of a dynamic come penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- c) such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP.

Excavation

All hand excavatable material including topsoil classified as hand excavatable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand.

The excavation of any material which presents the possibility of danger or injury to workers shall not be excavated by hand.

Clearing and grubbing

Grass and small bushes shall be cleared by hand.

Shaping

C.174 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

All shaping shall be undertaken by hand.

Loading

All loading shall be done by hand, regardless of the method of haulage.

Haul

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150 m.

Offloading

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage.

Spreading

All material shall be spread by hand.

Compaction

Small areas may be compacted by hand provided that the specified compaction is achieved.

Grassing

All grassing shall be undertaking by sprigging, sodding, or seeding by hand.

Stone pitching and rubble concrete masonry

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand.

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m.

Grout shall be mixed and placed by hand.

Manufactured Elements

Elements manufactured or designed by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. In addition, the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper handhold on them.

C.175 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

3.3.4 Schedules of quantities

Labour-intensive works must be highlighted in the schedules / bills of quantities for the payment items relating to labour-intensive works.

The following wording, as appropriate, may be included in the preamble or pricing instructions to the schedules / bills of quantities in the contract with the contractor:

- Those parts of the contract to be constructed using labour-intensive methods have been marked in the bill of quantities with the letters LI in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters LI are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.
- 2 Payment for items which are designated to be constructed labour-intensively (either

in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.

The following payment items should be included in the bill of quantities:

Item	Description	Unit	Quantity	Rate	Amount
	Training allowance paid to targeted labour in terms of formal training	Person days	(insert quantity)	(insert specified day rate)	
	Extra over for the administration of payment of training allowances to targeted labour	Person days	(as above)		
	Transport and accommodation of workers for training where it is not possible to undertake the training in close proximity to the site. (Provisional sum)	Sum	(insert provisional sum)		

C.176 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

4 DESIGN CHECKLIST

Cognisance of the following should be taken in the design of labour-intensive works:

- 1. Earthworks must be designed taking consideration of the method of construction, namely labour intensive.
- 2. Vertical and horizontal alignment of the works (roads, trenches, pipelines and stormwater channels) should be such to optimise cut and fill, minimise deep or hard excavation or areas requiring specialist Employer's Agenting input for example dewatering or specialist ground stabilisation.
- 3. During the design of gravel roads, suitable construction material should be sourced in close proximity to the site of the Works.
- 4. Drawings must be produced and presented in a clear, easily understandable way. Where setting out information is provided in the form of coordinates it should be backed up with methods, not relying on sophisticated surveying instruments, such as offsets measurable will the use of a standard tape. Where possible and appropriate drawings should be produced using a background of ortho photos to provide for easily identification of surrounding features.
- 5. Except in special circumstances, drawings should be produced in a form that is easily readable in A3 format.
- 6. Where the haul distance is greater than 150m, and less than 5000m, the use of small volume local transport, particularly using animal-drawn vehicles should be considered.
- 7. Excavation in material which may constitute a safety hazard for workers must be excluded.
- 8. All pre-manufactured materials which are incorporated into the Works must be sized such that the mass of individual elements does not exceed 320kg.
- 9. Hazardous material such as lime or harmful chemical stabilising agents must not be included in the Works.
- 10. Stone masonry and grouted stone pitching should be included wherever suitable material is available to the exclusion Cof pre-cast or cast in situ concrete stormwater structures.
- 11. Where compaction of road layer works is required, it must be carried out using conventional compaction equipment (mechanised pedestrian rollers where possible). Compaction of small areas and in trenches may be carried out using hand stampers.
- 12. Consideration must be given to alternative design of trenches for gravity pipelines to reduce depth of excavation.

C.177 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

- 13. Where there is an indication of local skills, e.g. bricklaying, structures should be designed to make use of such skills.
- 14. There are appropriate designs for labour-intensive construction of low-cost surfacing for low-volume roads, such as the Cape Seal and interlocking concrete blocks.



C.178 MAKHUDUTHAMAGA LOCAL MUNICIPALITY LIM473/MATHOUSAND-R&B/23/24/023

CONSTRUCTION OF ACCESS ROAD AND BRIDGE FROM MATHOUSANDS TO MARAGANENG

C5.3 TENDER DRAWINGS

Attached Separately.