

SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD



BUILDING SOUTH AFRICA
THROUGH BETTER ROADS

THE SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED

CONTRACT SANRAL X.002-184-2023/1

**PROCUREMENT OF THE OPERATIONS AND
MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM
IN THE GAUTENG PROVINCE, SOUTH AFRICA, AND A
NATIONAL TRANSACTION CLEARING HOUSE**

**VOLUME 3
PART C3 EMPLOYER'S REQUIREMENTS
PART C3.2.1 CONTRACT SCOPE
SECTION E REQUIREMENTS OF THE
OSH ACT AND REGULATIONS**

**CHIEF EXECUTIVE OFFICER
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED
48 TAMBOTIE AVENUE
VAL DE GRACE
PRETORIA, 0184**

NAME OF TENDERER:

Set sequential number



CONTRACT SANRAL X.002-184-2023/1

FOR

**THE PROCUREMENT OF THE OPERATIONS AND
MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM
IN THE GAUTENG PROVINCE, SOUTH AFRICA AND A
NATIONAL TRANSACTION CLEARING HOUSE**

**VOLUME 3
PART C3 EMPLOYER'S REQUIREMENTS
PART C3.2.1 CONTRACT SCOPE SECTION E
REQUIREMENTS OF THE
OSH ACT AND REGULATIONS**

COMPILED UNDER THE DIRECTION OF THE REGIONAL MANAGER:
NORTHERN REGION

SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED
38 IDA STREET
MENLO PARK
PRETORIA
SOUTH AFRICA
0081

sanralbid@dbsa.org

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING
SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION
CLEARING HOUSE

LIST OF CONTRACT DOCUMENTS

The following documents form part of this contract:

Volume 1: The FIDIC Conditions of Contract for Design, Build and Operate Projects (September 2008), issued by the International Federation of Consulting Engineers, which the Tenderer shall purchase himself.

Volume 2: Not applicable.

Volume 3: The Project Document, containing the tender notice, Conditions of Tender, Tender Data, Returnable Schedules, general and particular conditions of contract, project specifications, Pricing Schedule, Form of offer and Site Information is issued by the Employer. The Employer's Form of Acceptance and any correspondence from the selected tenderer, performance security-demand guarantee and all addenda issued during the period of tender will also form part of this volume once a successful tenderer has been appointed.

The conditions of tender are the standard conditions of tender as contained in the South African Bureau of Standards, SANS 10845-3:2015, Construction procurement – Part 3: Standard conditions of tender, document, which the tenderer shall purchase himself.

Volume 4: Not applicable.

Volume 5: Not applicable.

Volume 6: Not applicable.

Volume 7: Not applicable.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING
 SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION
 CLEARING HOUSE

The following documents form part of this Contract:

Volume 1	<u>The FIDIC Conditions of Contract for Design, Build and Operate Projects, First Edition 2008</u>
Volume 2	<u>Not Applicable</u>
Volume 3	<u>Project Document (Parts T1, T2, C1, C2, C3 and C4)</u>
Part T1	<u>Tender Procedures</u>
T1.1	Tender Notice and Invitation to Tender
T1.2	Tender Data
Part T2	<u>Returnable Schedules</u>
T2.1	List of Returnable Schedules
T2.2	Returnable Schedules
Part C1	<u>Agreements and Conditions of Contract</u>
C1.1	SAMPLE FORMS OF AGREEMENT
C1.2	CONDITIONS OF CONTRACT (PRINCIPAL CONTRACT)
C1.2.1	<i>Particular Conditions, Part A: Contract Data (Principal Contract)</i>
C1.2.2	<i>Particular Conditions, Part B: Special Provisions (Principal Contract)</i>
C1.3	CONDITIONS OF CONTRACT (TRANSITIONAL SUBCONTRACT)
C1.3.1	<i>Structure of Transitional Subcontract</i>
C1.3.2	<i>Particular Conditions, Part A: Contract Data (Transitional Subcontract)</i>
C1.3.3	<i>Particular Conditions, Part B: Special Provisions (Transitional Subcontract)</i>
Part C2	<u>Pricing Data</u>
C2.1	PRICING INSTRUCTIONS
C2.1.1	<i>Payment Methodology</i>
C2.1.2	<i>Part A - Contract: Payment Item Descriptions - DB</i>
C2.1.3	<i>Part B - Contract: Payment Item Descriptions - Ops</i>
C2.1.4	<i>Part A - Transitional Subcontract: Payment Item Descriptions - DB</i>
C2.1.5	<i>Part B - Transitional Subcontract: Payment Item Descriptions - Ops</i>
C2.2	PRICING SCHEDULE
C2.2.1	<i>Part A - Contract: Schedule of Payments - DB</i>
C2.2.2	<i>Part B - Contract: Schedule of Payments - Ops</i>
C2.2.3	<i>Part A - Transitional Subcontract: Schedule of Payments - DB</i>
C2.2.4	<i>Part B - Transitional Subcontract: Schedule of Payments - Ops</i>
Part C3	<u>Employer's Requirements</u>
C3.1	GLOSSARY OF TERMS AND CONDITIONS
C3.2	SCOPE OF SERVICES
C3.2.1	<i>Contract: Scope of Works</i>
	<i>Section A - Not applicable</i>
	<i>Section B - Specific Requirements (Project Related)</i>
	<i>Section C - Environmental Management Plan</i>
	<i>Section D - Small Contractor Development, Training and Community Liaison</i>
	<i>Section E - Requirements of the Occupational Health and Safety Act and Regulations</i>
C3.2.2	<i>Transitional Subcontract: Scope of Works Allocation</i>
C3.3	OPERATIONS REQUIREMENTS
C3.3.1	<i>General Operations Specifications</i>
C3.3.2	<i>Open Road Tolling Operations Specifications</i>
C3.3.3	<i>Transaction Clearing House Operations Specifications</i>
C3.3.4	<i>Violations Processing Centre Operations Specifications</i>
C3.4	TECHNICAL REQUIREMENTS

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

C3.4.1	<i>Standard Specs for Operations and Maintenance: E&M Specifications (2018)</i>
C3.4.2	<i>General System Specifications</i>
C3.4.3	<i>Road Side System Specifications</i>
C3.4.4	<i>Open Road Tolling Back Office System Specifications</i>
C3.4.5	<i>Transaction Clearing House System Specifications</i>
C3.4.6	<i>Violations Processing Centre System Specifications</i>
C3.4.7	<i>Standard Specifications for Operations and Maintenance: Electronic Toll Collection (ETC) (2018)</i>
C3.4.8	<i>Description of Section 1 Works and Services (Transitional Subcontract)</i>
C3.5	OTHER REQUIREMENTS
C3.5.1	<i>Part A - Contract: Contract Performance Measurement</i>
	<i>Part B - Transitional Subcontract: Subcontract Performance Measurement Allocation</i>
C3.5.2	<i>Project Business Rules</i>
C3.5.3	<i>Financial Management</i>
C3.5.4	<i>VAS Requirements</i>
Part C4	<u>Site Information</u>
C4.1	PROJECT INFORMATION
C4.2	THIRD PARTY AGREEMENTS TYPICAL TERMS
C4.3	CONTRACT: SUB-SUPPLY SERVICES TYPICAL TERMS
C4.4	TRANSITIONAL SUBCONTRACT: SURROUNDING ENVIRONMENT
C4.5	MISCELLANEOUS
C4.6	AGREEMENT TO OCCUPY SANRAL'S PROPERTY
C4.7	DISPUTE ADJUDICATION AGREEMENT

SECTION E: REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS

Note to tenderer:

Wherever reference is made in this section of the Scope of Works to the Contractor, this is the equivalent of the *principal contractor* in the Occupational Health and Safety Act and Regulations. Similarly, reference to subcontractors is equivalent to *other contractors*.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING
 SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION
 CLEARING HOUSE

**SECTION E: REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND
 REGULATIONS**

TABLE OF CONTENTS	PAGE
E1001 SCOPE	8
E1002 DEFINITIONS AND ABBREVIATIONS	8
E1003 HEALTH AND SAFETY POLICY	12
E1004 ROLES AND RESPONSIBILITIES	12
E1005 HSE TRAINING AND COMPETENCE	12
E1006 APPLICATION FOR CONSTRUCTION WORK PERMIT	13
E1007 DUTIES	14
E1008 MANAGEMENT AND SUPERVISION	14
E1009 RISK MANAGEMENT	14
E1010 LEGAL COMPLIANCE AND DOCUMENT CONTROL	16
E1011 OPERATIONAL INTEGRITY	18
E1012 OCCUPATIONAL HEALTH AND HYGIENE	19
E1013 WASTE MANAGEMENT	21
E1014 HAZARDOUS SUBSTANCE MANAGEMENT	21
E1015 CONTRACTORS	22
E1016 DESIGNING FOR HEALTH, SAFETY AND THE ENVIRONMENT	27
E1017 INCIDENT MANAGEMENT	27
E1018 PROJECT SPECIFIC CONSTRUCTION REQUIREMENTS	28

E1001 SCOPE

The Occupational Health and Safety Act, Act 85 of 1993 and its Regulations together with SANS Codes set out minimum standards with regards to Occupational Health and Safety. The South African National Roads Agency SOC Limited (SANRAL), has developed this Occupational Health and Safety Specifications with these minimum standards in mind and in certain stages the requirements of SANRAL exceeds the minimum legal requirements to follow best practices and to ensure a healthy and safe workplace for all.

SANRAL in no way assumes the Contractor's legal liabilities and responsibilities. The Contractor is and remains accountable for the quality and execution of his health and safety programme for his employees. This Health and Safety Specification reflects minimum legal and SANRAL requirements and should not be construed as all encompassing.

It is realized that The Contractor have its own Health and Safety Management system and safe work practices. The intention of this Health and Safety Specification is not to change the Contractor's Health and Safety management system, but for the Contractor to use its current Health and Safety management system to draw up a project specific Health and Safety plan according to these specifications as well as to legally comply with the Construction Regulations, GNR.84 of 2014.

It is the responsibility of the Contractor and other Contractors to make themselves conversant and comply with the requirements and conditions contained in the various legislation pertaining to their profession and scope of works at all times.

This specification is not exhaustive of all duties imposed by the Occupational Health and Safety Act, Act 85 of 1993 and its Regulations, governing the duties and obligations, of a Designer, Principal Contractor and Contractor performing duties in terms of an agreement with the client (SANRAL). These duties are fully described in the Occupational Health and Safety Act, Act 85 of 1993 and its Regulations and it is the duty of every Designer, Principal Contractor and Contractor to acquaint themselves therewith before commencing work.

Words used herein in the singular shall be deemed to include the plural and male shall include female and vice versa, unless the context otherwise requires.

This specification is compiled to ensure that the Contractor and any other contractor's working for SANRAL directly or through a Principal Contractor, are aware of the Occupational Health and Safety requirements when working on a SANRAL contract, as well as to make them aware of their legal liabilities and responsibilities as per the Occupational Health & Safety Act, Act 85 of 1993, and its Regulations.

E1002 DEFINITIONS AND ABBREVIATIONS

Assessment – An opinion or a judgment about someone or something that has been thought about very carefully.

At-risk behavior – Conduct that unnecessarily increases the likelihood of an injury or incident.

Audit – A systematic and documented review of the effectiveness of implementation of processes, programmes and procedures, based on general process criteria.

Baseline risk assessment: This is the initial assessment of risk in a workplace. It is a broad assessment and includes all activities taking place on site, but does not include risk control measures or safeguards.

CIDB – Construction Industry Development Board

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

Client – Any organization or person for whom construction work is performed. For the purpose of this document, the client is the South African National Roads Agency SOC Limited.

Communicate – The process of two way dialogue which is understood by both parties.

Competence – A combination of attributes such as knowledge, training, experience and qualifications to assure successful performance.

Competent Person – Means a person who has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No. 67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act.

Consequence – Outcome or impact of an event.

Continual Improvement – A recurring process of enhancing performance to achieve consistent improvements in overall performance.

Contractor – An employer as defined in section 1 of the OHS Act, who performs construction work and includes Principal Contractors and Sub-Contractors.

Construction Work – any work in connection with:

- The construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work.

Corrective Action – An action taken to eliminate the cause of a detected non-conformity or other undesirable situation.

Construction Regulations (CR) – Construction Regulations, GNR. 84 of 2014

Critical equipment – A piece of equipment or a structure whose failure to perform to design specification, has the potential to result in a major accident event.

Design – in relation to any structure, includes drawings, calculations, design details and specifications.

Designer –

- a) competent person who:
 - Prepares a design
 - Checks and approves a design
 - Arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
 - Designs temporary work, including its components
- b) an architect or engineer contributing to, or having overall responsibility for a design
- c) a building services engineer designing details for fixed plant
- d) a surveyor specifying articles or drawing up specifications;
- e) a contractor carrying out design work as part of a design and building project; or
- f) an interior designer, shop fitter or landscape architect

DMR – Driven Machinery Regulations, GNR. 295 of 26 February 1988

Documents – Structured units of recorded information and its supporting medium (paper or electronic). Most records are documents, but not all documents are records. A document becomes a record when it is part of a business transaction, is kept as evidence of that transaction and is managed within a record-keeping system.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

EIR – Electrical Installation Regulations, GNR. 242 of 6 March 2009

Emergency – An abnormal occurrence that pose a threat to the safety or health of employees, customers, or local communities, or which can cause damage to assets or the environment.

Employee – An individual who is employed by or works for an Employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person.

Employer – Any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerates him, but excludes a labour broker as defined in section 1(1) of the Labour Relations Act, 1956 (Act No. 28 of 1956).

EMR – Electrical Machinery Regulations, GNR. 250 of 25 March 2011

Environment – The surroundings or conditions in which a person, animal or plant lives or operates, including air, water, land, natural resources and habitats.

Epidemic Disease - An *epidemic* disease is one affecting many persons at the same time, and spreading from person to person in a locality where the disease is not permanently prevalent. The World Health Organization (WHO) further specifies *epidemic* as occurring at the level of a region or community.

Excavation work – The making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping

GAR – General Administrative Regulations, GNR. 929 of 25 June 2003

GMR – General Machinery Regulations, GNR. 1521 of 5 August 1988

GSR – General Safety Regulations, GNR. 1031 of 30 May 1986

Harm – A significant and or long lasting adverse effect on people, the environment or the community.

Hazard – A source, situation or act with a potential for harm in terms of human injury or ill health.

Health and Safety File – Means a file, or other record in permanent form, containing the information in writing as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 7(1)(b).

Health and Safety Plan – Means a project specific documented plan in accordance with the client's health and safety specifications, as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 7(1)(a).

Health and Safety Specification – Means a project specific document prepared by the client pertaining to all health and safety requirements related to construction work, as required by the Construction Regulations, GNR. 84 of 7 February 2014, Section 5(1)(b).

HSE – Health, Safety and Environment. Commonly used in the format HSE.

Incident – Work-related events (including accidents which give rise to injury, ill health, fatality or emergencies) that have resulted in, or has the potential to result in adverse consequences to people, the environment, property, reputation or a combination of these.

Likelihood – A description of probability or frequency, in relation to the chance that something will occur.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

Lost Time Injury (LTI) – When a person is injured during the execution of his/her duties and as a result of the injury is unable to perform his/her regular duties for one full shift or more on the day following the day on which the injury has incurred, whether a scheduled work day or not(weekend).

Management System – Management processes and documentation that collectively provide a systematic framework for ensuring that tasks are performed safely, correctly, consistently and effectively to achieve a specified outcome and to drive continual improvement in performance.

Mandatory – An agent, contractor or sub-contractor for work, but without derogating from his status in his own right as an employer or a user.

MSDS – Material Safety Data Sheet

Near Hit / Near Miss – Any occurrence or situation which had the potential for adverse consequences to people, the environment, property, reputation or a combination of these.

Non-conformance – Any deviation from work standards, practices, procedures, regulations that could either directly or indirectly lead to injury or illness, property damage, damage to the environment or a combination of these.

OHS Act – Occupational Health & Safety Act, 85 of 1993

Pandemic Disease - a *pandemic* disease is an *epidemic* disease that has spread over a large area, that is, it is prevalent throughout an entire country, continent, or the whole world.

Policy – Statement by an organization of its intentions and principles in relation to its overall performance which provides a framework for action and for the setting of its objectives and targets.

PPE – Personal Protective Equipment

Preventive Action – An action implemented to eliminate the cause of a potential non-conformity or other undesirable potential situation.

Principal Contractor – An employer appointed by the client to perform construction and / or operations and maintenance work and who is in overall control and management of a part of or the whole construction site.

Procedure – A specific documented way to carry out an activity or a process.

Records – Recorded information, in any form that is kept as evidence. Records include monitoring results, evidence of training, audits, inspections and calibration reports.

Risk Assessment – A process of evaluating the risk(s) arising from hazards taking into account the adequacy of any existing controls and deciding whether or not the risk(s) is acceptable.

Risk Management – The ongoing treatment of risks through the application of management policies, processes, procedures and risk control measures.

Risk – A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure.

Root Cause – The cause of the incident that, when rectified, will prevent the recurrence of not just incidents with those exact circumstances, but others with similar causes.

SACPCMP – South African Council for Project and Construction Management Professions

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

SANRAL - South African National Roads Agency SOC Limited

Supplier – A person or company that supplies material or equipment to a contractor on a construction site, but does not physically carry out construction work on the construction site.

The Act – The Occupational Health and Safety Act No. 85 of 1993

The Site – The area where work is carried out for SANRAL as defined on the front page of this document.

WAH – Acronym for Working at Heights.

E1003 HEALTH AND SAFETY POLICY

Contractors are expected to have their own written Health and Safety Policy. The policy should declare their attitude and approach to the health, safety and welfare of their employees and others. Provision must be made to review the policy regularly and the CEO or Managing Director must sign and date the policy to indicate his commitment to ensuring the health and safety of his employees.

E1004 ROLES AND RESPONSIBILITIES

Every Contractor is considered to be an employer in his own right and shall comply with all legal requirements pertaining to an employer, which include the responsibility to provide as far as reasonably practicable a safe and healthy working environment for his employees, as per Section 8 of the OHS Act.

In conjunction with Section 8 of the OHS Act, all employees on the project are responsible for their own safety as well as the safety of persons who may be affected by their acts, as per Section 14 of the OHS Act. It is the responsibility of each employee to ensure that he acts in a safe manner before, during and after work is carried out.

The Contractor shall ensure that where required by the OHS Act and Regulations, competent employees are appointed in writing. These appointments must be project / contract specific and specific to the tasks that will be performed. Every appointment must display the duties of the person appointed and training certificates from a registered training provider must be attached to such appointment (where applicable). A list of possible appointments can be found in clause E1010 below.

E1005 HSE TRAINING AND COMPETENCE

Where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2000 (Act No. 67 of 2000), those qualifications and training must be regarded as the required qualifications and training and employees must have attended courses of the aforementioned nature to be considered competent in the task.

All employees that forms part of the construction work must be trained and competent. Employees formally appointed to perform a certain duty must be in possession of a training certificate, received from a registered training provider. All employees must as a minimum have received site specific safety induction training and must receive daily safe task instruction training (DSTI) before any work commences.

a) Training Needs

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

There shall be a system in place to determine the training requirements of each individual, based on the tasks that the employee will perform as well as to ensure the health and safety of fellow employees and the public. Special attention should be given to employees who are new hires, new to the task or have combined responsibilities.

b) Basic Safe Work Training (Induction Training)

Every contractor shall ensure that his employees are inducted into his own company Health and Safety System as well as basic safe work training (HSE Induction Training). The Contractor shall ensure that his, all his Contractor's employees and visitors are inducted on the specific site safety procedures.

A Daily Safe Task Instruction (DSTI) must be conducted on site with all employees involved in the project. The DSTI must be carried out each day before work commences and proof thereof must be available on site. Each work crew may conduct their own specific DSTI to discuss the hazards, risks and control measures associated with their task for the day.

Where two or more contractors or work crews work in the same area, they should have a combined DSTI to ensure they know of the additional hazards the other contractor or work crew will introduce to their operations and what precautions to put in place.

The Contractor shall have evidence that employees have been trained on the relevant procedures prior to and during the project duration. The evidence will be in a form of attendance register.

c) Formal Training

All qualifications for which there are SAQA registered training courses, must be regarded as the minimum required qualifications and training. To be deemed "competent" an employee must have received training at a registered training provider, the training course must be registered and if there is an assessment, the employee must have been found competent after the assessment. A person cannot be deemed competent after awareness training only.

The Contractor shall ensure that his employees, as well as the employees of any contractors that may be used, have received appropriate training for the type of work that will be performed, e.g. First Aid, Flag Man, Mobile Plant Operator, Working at Heights, Risk Assessment training etc.

d) Records

Record of all training shall be kept by the employer and shall be readily available. Records shall make provision for refresher training where applicable. Where an employee is legally appointed with certain duties and responsibilities a copy of the training certificate must be attached to the appointment.

E1006 APPLICATION FOR CONSTRUCTION WORK PERMIT

Construction Regulation, 2014 Section 3 requires that the client apply for a construction work permit at least 30 days before construction work is started, if the intended construction work will:

- exceed forty million rand;
- exceed 365 days and will involve more than 3 600 person days of construction work; or
- if the tender value limit is a CIDB grade 7 or above.

If approved, the provincial director will issue a construction work permit in writing to perform construction work within 30 days of receiving the application and assign a site specific number for the construction

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

site. It is the intention of SANRAL to apply for a construction work permit as soon as the Contractor is appointed and his Health and Safety Plan is received, in order to minimize construction delays.

The site specific construction work permit number must be displayed at the main entrance to the site and a copy of the construction work permit must be kept in the Contractor's health and safety file for inspection purposes.

E1007 DUTIES

Various duties are imposed on the client, designer, principal contractor and other contractors by the Construction Regulation, 2014, Sections 5, 6 & 7. SANRAL will comply and carry out the required duties as contemplated in Section 5 of the Construction Regulations, 2014 and it is expected from the designer and every contractor to make themselves conversant with the requirements and duties imposed on them and to ensure that they comply with the requirements of section 6 & 7 at all times.

E1008 MANAGEMENT AND SUPERVISION

The Contractor shall ensure that the project is managed safely and legal compliance is ensured at all times.

A full-time competent person must be appointed as a Construction Manager to manage all construction work, including health and safety compliance. The construction manager may not be appointed to manage more than one single construction site.

The construction manager must appoint construction supervisors responsible for construction activities and ensuring occupation health and safety on the construction site.

The Contractor must appoint a full-time construction health and safety officer, who is registered with the SACPCMP, to assist in the control of health and safety aspects on site.

E1009 RISK MANAGEMENT

The Contractor must follow a formal risk based approach to ensure hazard control measures are implemented to an acceptable reasonable practical level. The Contractor and his employees shall be responsible to ensure all hazards pertaining to his scope of activity are proactively identified, the risks assessed and appropriately eliminated or minimized and managed on an ongoing basis. Risk assessments shall also identify possible and potential environmental, health and hygiene issues pertaining to each hazard with potential exposures and limits.

a) Risk Assessment**i) Hazard Identification and Risk Assessment (Construction Regulation 9)**

The Contractor shall, before the commencement of any construction work or work associated with the aforesaid construction work or any operations and maintenance work and during such work, conduct a risk assessment by a competent person, appointed in writing and the risk assessment so produced shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 9(1). Competence is a factor of training, knowledge, experience and/or appropriate qualifications.

The risk assessment shall include, as far as is reasonably practicable, at least:

- The task or task step

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

- the identification of the risks and hazards to which persons may be exposed during the task or task step;
- The analysis and evaluation of the risks and hazards identified, inclusive of a residual risk rating methodology. The method to be used is not prescribed;
- a documented plan of safe work procedures, to mitigate, reduce or control those residual risks that have been identified as unacceptably high, by means of the rating system;
- a monitoring plan;
- a review plan, inclusive of dates to be adhered to; and
- Ergonomic related risks are to be analysed, evaluated and addressed as part of the process.

Based on the risk assessments, the Contractor shall develop a set of site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessments, together with the site-specific OH&S rules shall be submitted to the Employer before construction on site commences. SANRAL has conducted a Baseline Risk Assessment as per clause E1009 (b) below, which must be used by the Contractor to develop task specific risk assessments before work commences. This does not mean that all possible Risk Assessments must be attended to before work commences, but that all relevant Risk Assessments receive the necessary attention as the contract progresses, and this is the responsibility of the Contractor.

All variations to the scope of work shall similarly be subjected to a risk assessment process.

ii) **Risk Assessment Monitoring**

The Contractor shall ensure that a monitoring plan for all risk assessments are in place. Risk assessments must be monitored to ensure effectiveness and employee understanding. The monitoring of risk assessments shall be formal and records thereof shall be available for audit purposes.

iii) **Review of Risk Assessment**

The Contractor shall review the hazard identification, risk assessments and standard safe working procedures prior to any work activity commencement and 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 Contractor shall provide the Employer, sub-contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated above.

Activities carried out without conducting a risk assessment or found to be non-compliant with the risk assessment, will be stopped until such time a risk assessment is compiled and work is carried out according to the risk assessment.

Risk assessments must be fully communicated to all relevant personnel and must be considered when establishing training, awareness and competency requirements.

b) **Baseline Risk Assessment**

SANRAL prepared a Baseline Risk Assessment from which the Health and Safety Specifications for this project was prepared. The Baseline Risk Assessment highlights all work for which the Contractor must prepare safe work procedures and or work method statements. It must be noted that the Baseline Risk Assessment is not exhaustive and Principal Contractors are required to identify risks and come up with control measures, this must be identified by Principal Contractor

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

when preparing the Issue Based Risk Assessments. During the briefing, the client will brief tenderers about the hazards and risks that are associated with the anticipated construction work.

The Baseline Risk Assessment for this Project can be found in clause E1018.

c) **Continuous Risk Assessment**

The Contractor shall continuously assess the risks of the activities that are carried out. Risk assessments must be in writing, site specific and must be reviewed continuously to ensure it is current and it address all the relevant hazards and risks associated with the specific activity at the specific site.

The Risk assessment must be discussed with the whole work crew before the activity starts and the work crew must acknowledge in writing having discussed the risk assessment and that they understand it. This acknowledgement must be on site and must be available to the client for audit purposes.

E1010 LEGAL COMPLIANCE AND DOCUMENT CONTROL

The Contractor is required to implement systems and procedures to ensure legal compliance through:

- Identification of all relevant HSE legislation, standards and codes applicable to its operations.
- Have available copies of all relevant HSE legislation, standards and codes for reference purposes.
- Update legislation, standards and codes with any changes
- Communicate to all employees any changes that may affect their accountabilities and conformance
- Incorporate any legal requirements into their HSE management system
- Monitor and review their HSE management system for effectiveness.

The Contractor shall, as a minimum, comply with:

- The Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up-to-date copy of which shall be available on site at all times.
- The Compensation for Occupational Injuries and Diseases Act (Act 130 of 1993), an up-to-date copy of which shall be available on site at all times.
- Where work is being carried out on a "mine", the Contractor shall comply with the Mines Health and Safety Act and Regulations (Act 29 of 1960) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mines Health and Safety Act and Regulations shall be available on site at all times.

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 24: Electrical Installations and Machinery on Construction Sites) the Contractor shall be conversant with and shall comply with these regulations.

All legal appointments of the Contractor regarding the Health and Safety of his employees who are to work on the project are addressed and governed by the OHS Act and applicable Regulations. Legal appointments must be in place and must reflect in the project safety file before work commences.

a) **Overall Supervision and Responsibility for OH&S**

SANRAL will appoint the Contractor in terms of Construction Regulation 5(1)(k). A Mandatory agreement as per Section 37.2 of the OHS Act, shall be signed between SANRAL and the Contractor.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

It is a requirement that the Contractor, when he appoints other contractors in terms of Construction Regulations 7(1)(c), 7(1)(d), 7(1)(f) and 7(3) includes in his agreement with such Contractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatory".
- OH&S Act (85 of 1993), Section 16(2) appointee(s) as detailed in his/her/their respective appointment forms. (Where applicable).

The signed Mandatory agreements shall be placed in the project file for reference and for audit trail purposes.

b) Specific Supervision Responsibilities for OH&S

The Contractor shall appoint designated competent employees and/or other competent persons as required by the OHS Act and Regulations, as well as this specification. Appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated to and agreed with the appointees. Where applicable, the training certificate must be attached to the appointment. Notice of appointments shall be submitted to the Employer. All changes shall also be communicated to the Employer.

Below is a list of possible appointments for the project, which is not an all-inclusive list, but for reference purposes only:

Appointment	Legal Reference
Assistant to CEO	OHS Act 16(2)
Health and Safety Representative	OHS Act 17(1)
Nominated Health and Safety Committee Member	OHS Act 19(3)
Contractor (Sub-contractor)	CR 7(1)(c)(v)
Construction Manager & Alternate Construction Manager	CR 8 (1)
Assistant Construction Manager	CR 8(2)
Health and Safety Officer	CR 8(5)
Construction Supervisor	CR 8(7)
Assistant Construction Supervisor	CR 8(8)
Risk Assessor	CR 9(1)
Fall Protection Plan Developer	CR 10(1)(a)
Structure Inspector	CR 11(2)(a)
Temporary Works Designer	CR 12(1)
Temporary Works Supervisor	CR 12(2)
Excavation Supervisor	CR 13(1)(a)
Demolition Supervisor	CR 14(1)
Competent Person in the use of Explosives	CR 14(11)
Scaffold Supervisor	CR 16(1)
Suspended Platform Supervisor	CR 17(1)
Rope Access Supervisor	CR 18(1)(a)
Material Hoist Inspector	CR 19(8)(a)
Bulk Mixing Plant Supervisor	CR 20(1)
Explosive actuated fastening device Inspector	CR 21(2)(b)
Explosive actuated fastening device cartridge Controller	CR 21(2)(g)(i)
Construction Vehicle & Mobile Plant Operator Authorised	CR 23(1)(d)(i)

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

Appointment	Legal Reference
Temporary Electrical Installation Controller	CR 24(c)
Stacking and Storage Supervisor	CR 28(a)
Fire Equipment Inspector	CR 29(h)
Incident investigator	GAR 9(2)
Lifting tackle inspector	DMR 18(10)(e)
Ladder inspector	GSR 13(a)
Certified Explosives Manager	ER 12(1)
First Aider GSR	GSR 3(4)
Hazardous Chemical Substance Supervisor	

In addition to the above, the Employer requires that a Traffic Safety Officer be appointed.

It is a requirement that the Contractor shall provide the Employer with an organogram of all sub-contractors that he/she has appointed or intends to appoint and keep this list updated and prominently displayed on site.

c) **Designation of OH&S Representatives (Section 17 of the OH&S Act)**

Where the Contractor employs more than 20 persons (including the employees of sub-contractors) he has to appoint 1 (one) OH&S representative for every 50 employees or part thereof. This is a minimum (legal) requirement. The Contractor may at his own discretion appoint more OH&S representatives according to site specific requirements. General Administrative Regulation 6 requires that the appointment or election of the OH&S representatives be conducted in consultation with employee representatives or employees (Section 17 of the Act and General Administrative Regulation 6 & 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation. OH&S representatives must be experienced, permanently employed by the Contractor or his sub-contractors, trained and able to move freely within their designated area of responsibility.

d) **Duties and Functions of the OH&S Representatives (Section 18 of the OH&S Act)**

The Contractor shall ensure that the designated OH&S representatives perform their functions in respect of the workplace or section of the workplace for which they have been appointed. These functions include: conduct continuous monitoring and monthly inspections of their respective areas of responsibility, focusing on unsafe acts and unsafe conditions and report thereon to the Contractor. OH&S representatives shall participate in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings. The complete list of functions can be found in Section 18 of the OHS Act.

e) **Appointment of OH&S Committee (Sections 19 and 20 of the OH&S Act)**

The Contractor shall establish an OH&S committee, which shall meet at least once a month, where two or more Health and Safety Representatives have been appointed. OH&S representatives must be appointed as OH&S committee members. The number of management appointed members may not exceed the number of OH&S representatives on the committee.

E1011 OPERATIONAL INTEGRITY

The operational integrity of plant, equipment, structures and protective systems must be monitored and assured on an ongoing basis throughout the project cycle. Hazards must be identified, assessed and

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

as far as reasonably practicable, eliminated or the risks treated to as low as reasonable practicable (ALARP).

a) Construction Plant & Equipment

The Contractor shall maintain all items of plant and equipment necessary to perform the work in a safe condition.

SANRAL reserves the right to inspect items of plant and equipment brought to site and used on site by the Contractor. Should it be found that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, the Contractor will be advised of such observation / inspection, and the Contractor shall be required to repair, make safe or remove such item from operation and replace it with a safe and adequate substitute.

The Contractor shall ensure that all plant, equipment, and power tools that are brought onto and used on site are:

- Appropriate for the type of work to be performed
- Placed on a register and inspected by a competent person or the authorized operator before use, daily or monthly dependent on Legislation and project requirements.
- Record inspection findings on a register that must be kept on site.
- The inspection register shall reflect the serial number of the plant, equipment or power tool.
- Maintained and used in accordance with the manufacturers recommendations
- Have adequate machine guarding fitted to all exposed rotating or moving parts, as reasonably practicable, that have the potential to cause harm
- All electrical power supply units are protected with operational earth leakage devices.
- Any defective, damaged or sub-standard equipment must be marked as unsafe for use and removed from operation as soon as possible

b) Standards and Registers

As standard project procedures, the Contractor is expected to:

- Set up an initial set of registers as per the requirements of the OHS Act and Regulations.
- Complete the registers for each piece of plant, tool and equipment brought on and used on site
- Maintain a complete, continuous and comprehensive inspection and service history in these registers or checklists
- Ensure daily, weekly, monthly inspections are done and recorded for all plant, tools & equipment by a competent person as required by the OHS Act and Regulations.
- Have the inspection and maintenance records available for audit purposes.

E1012 OCCUPATIONAL HEALTH AND HYGIENE

a) Medical Fitness for Duty

Contractor employees shall undergo medical examinations and be certified fit for duty by an Occupational Health Practitioner on an assessed risk basis before they are allowed to work on Site.

The medical certificate must be in the form of Annexure 3 of the Construction Regulations and stipulate the possible exposures the employee might be exposed to during the execution of the project.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

It is recommended and in the best interest of the Contractor to implement pre-employment as well as exit medical surveillance, especially with regards to Section 8 of the Noise Induced Hearing Loss Regulation.

b) First Aid

According to GSR 3(4), where more than 10 employees are employed at a workplace / worksite, the Contractor shall ensure that there is at least one trained first aider for every group of 50 employees at the workplace/site. First Aid boxes must be provided where more than 5 employees are employed and must be readily available and accessible for the treatment of injured persons at the workplace.

To ensure immediate treatment of an injured person, it is recommended that all work crews have at least one trained first aider, with a fully stocked first aid box, irrespective of the number of people in the work crew. This is especially important when contractors work at great distances from the nearest emergency facility or town. These persons shall be appointed in writing as the first aiders with their certificates attached as proof of competency.

The minimum contents of the first aid box shall be as per the supplied list in the General Safety Regulations.

All treatments done must be recorded on a register and kept with the first aid box. A trained and appointed first aider must be responsible for the first aid box and its content. Used content must be replenished as soon as possible.

In order to ensure prompt response at the emergency facility it is recommended that the W.Cl 2 forms be partially completed with the employers' details.

c) Hygiene Facilities

The Contractor and his contractors shall ensure compliance to Section 30 of the Construction Regulations with regards to facilities on the construction site as well as where accommodation is provided to employees on remote sites. The Contractor shall ensure that the facilities are kept clean at all times, either through a service provider or self-employed persons. The Contractor shall provide employees with at least one sanitary facility for each sex and for every 30 workers, changing facilities for each sex and sheltered eating areas.

d) Health related Epidemics and Pandemics

The Contractor shall, as far as reasonably practicable describe in his health and safety plan how health related epidemics and pandemics will be dealt with. The Employer is aware that this section in the health and safety plan will not speak to specifics, but generic procedures. The Contractor must ensure that the requirements stipulated in the Hazardous Biological Agents (HBA) Regulation are adhered to and in particular the following as described in the mentioned Regulation:

- Risk Assessment and risk assessment reviews;
- Prevention measures;
- Response measures;
- Employee training / information sharing;
- Employee health monitoring;
- Management of infected persons;
- Isolation rooms;
- Employee transportation;

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

- Employee accommodation;
- Eating facilities;
- Meetings / toolbox talks / Daily safety talks;
- Cleaning of offices / facilities;
- Duties of person that may be exposed to HBA's
- Monitoring exposure at the workplace
- Medical surveillance of employees
- Keeping of records
- Personal Protective Equipment and facilities
- Maintenance of control measures and facilities

Once the nature and scale of the epidemic or pandemic is known, the Contractor must update his health and safety plan with the relevant information and send the updated plan to the relevant appointed OHS Agent for approval. Once approved, the Contractor must implement the updated health and safety plan and maintain the updated plan on site.

E1013 WASTE MANAGEMENT

The Contractor shall comply with all applicable and relevant Waste management legislation, as well as municipal bylaws applicable to waste management.

The Contractor shall remove all waste generated at the construction site on a daily basis or as soon as possible after generation to ensure good housekeeping at all times. The Contractor shall have a waste management plan which must be implemented on the construction site and which will have the objective to ensure that waste is managed according to the Waste Management Hierarchy:

- Reduce what you can. If you cannot reduce then,
- Re-use what you can. If you cannot re-use then,
- Recycle what you can. What you cannot recycle,
- Convert into energy sources. If it cannot be converted to an energy source,
- Dispose of in a landfill – this is only to be done as a last resort and disposed without endangering human health and without using processes or methods which could harm the environment.

E1014 HAZARDOUS SUBSTANCE MANAGEMENT

The Contractor shall ensure that hazardous substances brought onto site are easily identifiable and stored according to the requirements of the General Safety Regulations, GNR. 1031 of 1986, Section 4.

Where flammable liquids are being used or stored, this must be done in a manner which would not cause a fire or explosion hazard.

The Contractor shall have Material Safety Data Sheets (MSDS) readily available for flammable, hazardous and toxic chemical substances and materials brought onto site and shall ensure that his employees are trained in these MSDS's.

Flammable, hazardous or toxic chemical substances may not be stored in empty food or drink containers. Empty flammable, hazardous and toxic containers must be disposed of in a safe manner, which will prevent further use of such a container.

A survey of the construction site must be done during site establishment, to locate any asbestos. Should asbestos be located, the conditions of the Asbestos Regulations, GNR. 155 of 2002 must be followed and complied with.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

E1015 CONTRACTORS

a) Consultations, Communications and Liaison

OH&S liaison between the Employer, the Contractor, applicable Sub-contractors, the designer and other concerned parties will be through the OH&S committee. In addition to the above, communication may be directly to the Employer or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their construction managers and supervisors, OH&S representatives and the OH&S committee. The Contractor shall be responsible for the dissemination of all relevant OH&S information to The Contractors e.g. design changes agreed with the Employer and the designer, instructions by the Employer and/or his/her agent, exchange of information between subcontractors, the reporting of hazardous/dangerous conditions/situations etc. The Contractors' most senior manager on site shall be required to attend all OH&S meetings.

b) Operational Procedures

Each construction activity shall be assessed by the 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 Contractor:

- to be conversant with all relevant Regulations;
- to comply with their provisions;
- to include them in his OH&S plan where relevant

c) Checking, Reporting and Corrective Actions

i) Monthly Audit by Employer (Construction Regulation 5(1)(o))

The Employer will conduct monthly health and safety and document verification audits in compliance with Construction Regulation 5(1) (o) in order to ensure that the Contractor has implemented and is maintaining the agreed and approved OH&S plan.

The Contractor will ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the Contractor and any contractor, but at least once every 30 days.

The Contractor will be provided with a copy of the Health and Safety audit report within seven days after the audit. The employer or his representative may stop any Principal Contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specification and the contractor's health and safety plan for the specific site.

ii) Other Audits and Inspections by the Employer

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

iii) Principal Contractor's Audits and Inspections

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

The Contractor must conduct his own regular internal audits to verify compliance with his own OH&S management system, as well as with this specification. The Contractor shall furthermore ensure that each contractor's health & safety plan is being implemented by conducting periodic audits at intervals mutually agreed between the Contractor and contractors, but at least once per month.

iv) Inspections by OH&S Representatives 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.

v) Recording and Review of Inspection Results

All the results of the abovementioned 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.

d) **Project Health and Safety Management Plan**

As per Section 5(1) (l) and Section 7(1) (a) of the Construction Regulations of 2014, the Contractor shall develop, implement and administer a Health and Safety Management Plan. The plan shall be in writing and shall be negotiated between the Contractor and SANRAL or designated OHS Agent and must be approved by SANRAL or the designated OHS Agent prior to the commencement of work on site. The plan shall demonstrate management's commitment to ensure employee health and safety as their primary objective during the contract. As a suggestion, the following elements may be used to develop the H&S plan:

Introduction

- Mission
- Purpose & Scope
- Health, Safety and Environmental Policy
- Health, Safety and Environmental Goals
- Plan Objectives

Leadership and Commitment

- Values supporting commitment
- Roles, Responsibilities and Accountability

Hazard and Risk Management Process

- Effective Consultation
- Planning

Contractor HSE Alignment

- Sub-Contractors
- On-Site

Learning and Competency

- Project HSE Training and Competency Requirements
- Contractor & Sub-Contractor Duties
- Minimum Training Requirements
- Medical and Induction
- Employee details
- Visitors to site
- Induction

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING
SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION
CLEARING HOUSE

Involvement, Communication and Motivation

- Safety Meetings
- Health & Safety Behavior
- Information and Learning

Hazard and Risk Management on site

- Hazardous Activities
- Hazardous Areas
- Hierarchy of Hazard Control
- Hazard and Risk Identification
- Risk Analysis and Evaluation
- Documented safe work procedures for hazardous activities
- Hazard and Risk monitoring plan
- Hazard and Risk review plan

Occupational Health and Hygiene

- Fitness for Work
- Hazardous Substances
- Airborne Chemical Substances
- Noise and Vibration
- Personal Hygiene
- Protection of Outdoor Workers
- Occupational Health Services on Site

Performance Tracking and Accountability

- Positive Performance Indicators
- Workplace Observations and Audits
- Reporting

Incident Management

- Emergency Preparedness and Response
- Incident Management
- Injury Management

Waste Management

- Hazardous Waste
- Non Hazardous Waste - Recyclable
- Non Hazardous Waste – Non recyclable

e) **Project Health and Safety File**

The Contractor shall compile a project specific Health and Safety File that consist of all the relevant project specific documentation. The Health and Safety file may consist of multiple files, which when combined should contain all the required documentation.

It is recommended that the project specific Health and Safety file contain at least the following:

- Scope and summary of the project as well as any scope changes.
- Notification of Construction Work to DoL / Copy of Work Permit
- Proof of COID registration (Letter of Good Standing)
- Contractor Health and Safety Policy statement signed by management
- Mandatory Agreement – OH&S Act 37.2 (Between Employer and Principal Contractor)
- Signed Client Health and Safety specification
- Latest copy of the OHS Act and Regulations
- Company Organogram depicting Health and Safety Responsibilities, including sub-contractors

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

- Employee list including copy of IDs and medicals
- Project specific Health and Safety Management Plan agreed with the Employer – See point 16.4 above
- Relevant OH&S Legal appointments which includes duties and responsibilities as well as competencies (training certificate)
- Copies of minutes of meetings - OH&S committee and other relevant OH&S meeting minutes
- Designs/drawings (Construction Regulation 7(1)(e))
- Site specific Fall Protection Plan (if applicable)
- Risk Assessments
- Contractor Induction material
- Waste management Plan
- Emergency preparedness (first aid, firefighting, emergency plan, etc.)
- Emergency Contact Telephone numbers
- HIV awareness program
- List of hazardous chemical substances used on site
- Material Safety Data Sheets of hazardous chemicals on site
- List of plant & equipment to be used on site
- Inspection Checklists/Registers of plant & equipment and emergency equipment
- List of Sub-contractors including type of work
- Sub-contractor 37.2 Mandatory Agreements
- Sub-contractor appointments which shall include the type of work the Contractor is appointed for.

f) **Contracting Philosophy**

Any site specific hazards and safety management expectations will be made known to the Contractor prior to the work commencing on site. Legal OHS requirements contained in the OHS Act and Regulations as well as SANS Codes are the minimum requirements the Contractor must apply during this contract with regards to Occupational Health and Safety. The Contractor shall apply, implement and enforce the minimum OHS Act & Regulations and SANS Codes requirements.

g) **Workers Compensation Registration**

The Contractor shall ensure that his employees are covered for any occupational injuries and illnesses in terms of the Occupational Injuries and Diseases Act 130 of 1993, which cover shall remain in place and up to date for the duration of the project.

h) **HSE Non-Compliance**

It is a legal duty of the client according to the Construction Regulation 5(1) (q) that a Principal Contractor is stopped from executing any activity which poses a threat to the health and safety of persons. Depending on the seriousness of the non-compliance only the specific activity may be stopped until the non-compliance is rectified or the whole operation may be stopped.

It is also the duty of every employee to take reasonable care of his own health and safety and of other persons who may be affected by his acts as per OHS Act, Section 14(a). Keeping this in mind, it is required of the Contractor to ensure his employees has the right to remove themselves from any unsafe situation or work activity, without any negative consequence to them until such time as the Contractor has made the unsafe situation or activity as safe as practicable possible.

i) **Indemnity by Contractor**

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

The Contractor shall indemnify the Employer against and from all damages, losses and expenses (including legal fees and expenses) resulting from:

- i) the loss of output and delay caused by the slowing down or partial or total stoppage of work caused by:
 - all or any of the Contractor's workforce as a result of a dispute between all or any of the Contractor's workforce and the Contractor; or
 - all or any of the Contractor's suppliers' difficulty or impossibility to deliver goods or materials needed to perform the Works;
- ii) Any unlawful, riotous or disorderly conduct by or amongst the Contractor's personnel."

j) **The Contractor Conduct**

Guidelines to the most important rules that shall be implemented and maintained by the Contractor:

- Complete compliance to the OH&S Act 85 of 1993 and Regulations
- Hazard identification and Risk Assessments for all activities
- Daily communication of DSTI talk before work commences
- Safe access and egress to and from work areas.
- Compulsory use of lifelines, Safety Harnesses and Fall Arrestors (Lanyards to be attached at all times)
- Scaffold shall comply with Legal and SANS standards at all times
- Good housekeeping and stacking practices
- Safe lifting, rigging and slinging practices
- Complying to Legal standards for lifting machinery & equipment
- No lifting in wind conditions exceeding 30km/h (This is a guide and is dependent on risk assessments)
- Securing of tools, equipment and material at heights
- Wearing of appropriate personal protective equipment as identified in the risk assessment

Supervisors in charge are responsible for ensuring that the employees are aware of the hazards / risks involved in the work they will be doing / are doing and shall ensure the safety rules are obeyed.

No person shall act in a manner that endangers or is likely to endanger, the safety of any other person, or cause harm to any other person.

An employee who observes any dangerous situation, shall as soon as possible inform the person who is responsible for that section of the site.

Any employee who becomes aware of any person disregarding any safety rules, shall remind that person of the rules. If he persists in disregarding the rules, the matter must be reported to his supervisor.

No person shall damage, alter, remove, render ineffective or interfere with anything that has been provided for the protection of the site, or for the health and safety of persons.

No person shall interfere with or use firefighting equipment without authority and training.

No person in a state of intoxication or condition that render him incapable of controlling himself shall enter or be allowed to enter the site.

No alcohol or illegal drugs shall be taken onto the site.

All safety and warning signs shall be obeyed.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

Always be alert of construction vehicles as well as traffic. Never turn your back to oncoming traffic, always have a line of sight.

k) Contractor and Sub-contractor Management

The Contractor shall establish, maintain and ensure that all his contractors establish and maintain HSE standards and systems as necessary and to comply with the Legal requirements as well as these HSE specifications.

The Contractor shall be solely responsible for carrying out work on the project, having the highest regard for the health and safety of his employees and people in the vicinity of his work area.

l) Public Health and Safety

The Contractor shall, as far as is reasonably practicable, 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
- Passers-by to the site.

E1016 DESIGNING FOR HEALTH, SAFETY AND THE ENVIRONMENT

Designing for safety is a process aimed at minimizing injury, death, property damage or destruction and harm to the environment, by utilizing an approach to identify and eliminate or control hazardous areas. The project Designer and Contractor must implement a process that ensures safety is incorporated in the design process, which includes temporary works as contemplated in the Construction Regulations, 2014 Section 12.

The Contractor must communicate the anticipated risks and hazards resulting from the design to his employees and establish safe work procedures for the temporary works.

E1017 INCIDENT MANAGEMENT

The Contractor shall ensure that a culture exists within his company that promotes the recognition, response, reporting and investigation of incidents, including near misses (near hits). The Contractor must implement a procedure for reporting and investigating accidents, incidents and near misses. The Contractor should have a clear objective and target to obtain zero injuries for the duration of the project and such an objective must be communicated to all employees.

Appropriate corrective actions must be implemented and the applicable learnings must be shared within The Contractors business to prevent a recurrence of the incident or to prevent the near miss from becoming an incident in future.

(a) Incidents and Accidents

The Contractor and his contractors shall coordinate their investigation of all accidents/incidents where employees and non-employees were injured to the extent that he 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, which must be updated with each accident/incident.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

The Contractor shall notify the relevant SANRAL Project Manager and or SANRAL OHS Specialist of any incident / accident within the Contractors or his Contractors area of responsibility in writing as soon as possible.

Although the accident / incident is reported to the client, the Contractor has a responsibility and is required by law to report any Section 24 accidents and incidents to the Department of Labour. Any road traffic accident must be reported to the relevant authorities.

It is essential that the Contractor demonstrate that corrective and preventative action has been taken to prevent a similar incident in future and that it is communicated to all the Contractors affected staff. A copy of the investigation, corrective and preventative action taken as well as the attendance register of the employees who attended the discussion of the incident and the action implemented to prevent a similar incident, must be forwarded to the SANRAL Project Manager and or the SANRAL OHS Specialist.

Investigations must be completed for:

- Near Miss Incidents (To prevent it from becoming an incident)
- First Aid case Incidents
- Medical treatment case Incidents
- Fatalities

(b) Incident Reporting

The Contractor shall provide the Employer with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring. In addition, the Contractor shall update monthly the Disabling Injury Frequency Ratio (DIFR) and display this information on a signboard at the site office.

The Contractor is responsible for collecting, recording, calculating and reporting his and his sub-contractors Health & Safety statistics to the SANRAL OHS Specialist.

The statistics should contain at least the following for all employees of all contractors working on the project:

- Total Number of workers
- Total Number of hours worked (on the SANRAL project)
- Total Number of Near Miss Incidents
- Total Number of First Aid case Incidents
- Total Number of Medical Treatment case Incidents (Excluding Section 24 type incidents)
- Total Number of Section 24 type Incidents
- Preventative actions taken on incidents that have occurred
- Communication to employees and contractors of incidents and preventative actions.

E1018 PROJECT SPECIFIC CONSTRUCTION REQUIREMENTS

The clause contains specific requirements for Contract NRA X.002-184-2023/1, which must be adhered to in addition to minimum legislative requirements.

a) Baseline Risk Assessment

The following is a list of risks identified which forms the Baseline Risk Assessment for the project prepared by the Client in terms of Construction Regulation 5(1) (a):

Risks in connection with:

- Personal health risks in connection with ablution facilities, eating areas, drinking water.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

- Secure/safe storage of materials, plant and equipment
- Secure/safe storage and use of hazardous and/or flammable materials
- Maintenance workshop - onsite repairs to construction vehicles, mobile plant & equipment.
- Possibility of asbestos in existing structures
- Existing services, e.g. gas, telecommunications, electrical supply and similar
- Temporary electrical installations
- 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)
- Biological hazards, e.g. bees, snakes, spiders
- Environmental risks, e.g. lighting, strong winds, heavy rains, dark environments, hot/cold and wet environments
- Exposure to a water environment
- Exposure to noise
- Exposure to vibration
- HIV/Aids and other diseases such as silicosis or asbestosis, where applicable
- Hazardous Biological Agents that could lead to epidemics and/or pandemics
- Use of portable electrical equipment including, but not limited to:
 - Angle grinder
 - Electrical drilling machine
 - Circular saw
 - Generator
- Excavations including, but not limited to:
 - Ground/soil conditions
 - Trenching
 - Shoring
 - Drainage of trenches
- Welding including, but not limited to:
 - Arc welding
 - Gas welding
 - Flame cutting
 - Use of LP gas torches and appliances
- Loading and off-loading of trucks, including material deliveries
- 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
 - Grader
 - Parking of vehicles and mobile plant
 - Towing of vehicles and mobile plant
- Layering and bedding
- Installation of pipes in trenches
- Pressure testing of pipelines
- Backfilling of trenches
- Protection against flooding
- Gabion work
- Use of explosives
- Overhead Electrical Cables
- Work adjacent or in proximity of railway lines
- Work adjacent or in proximity of traffic
- Working in elevated positions

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

- Working in confined spaces – tunnelling
- Formwork and support work (temporary works) including scaffolding
- Demolition work, where applicable
- Bulk mixing plant, where applicable
- Environmental impacts such as pollution of water, air or soil.
- Use and storage of cleaning materials, flammable liquids and other hazardous substances;
- Installation and maintenance of all equipment, including electrical, mechanical and electronic equipment;
- Protection of diesel storage tanks (including spill control);
- As discovered from any inspection and audits conducted by the Employer or by the Contractor or any other subcontractor on Site;
- As discovered from any accident/incident investigation;
- Personnel movement within the operational areas and buildings;
- Traffic movement within the operational and designated parking areas;
- Accident Management in the operational areas, including but not limited to tanker explosions, chemical leaks, asset damage;
- Security – movement around and within the operational areas and buildings;
- Security – armed robberies and/or high jacking in the operational areas and buildings;
- Damage, vandalism and theft of assets;
- Cash transfer to cash-in-transit companies;
- Exposure to noise and pollution in the operational areas and surrounding environment;
- Protection against dehydration and heat exhaustion; and
- Protection from wet and cold conditions.

b) **Daily Site Attendance Register**

The Contractor shall keep a daily site register so as to be able to identify the entire Contractors personnel on site in case of an emergency or evacuation situation. The attendance register must include permanent as well as temporary workers working on the site.

All site visitors and any new contractors shall report to security / reception upon arrival at site. The Contractor will only be granted first time access to work on the site if all required documentation has been provided and approved.

All visitors need to sign an attendance register when visiting the site. Visitors include all persons which are not permanently working on the site, but excludes temporary site workers. Visitors must undergo site induction training before they are allowed on site to make them aware of the site dangers.

c) **Emergency Numbers / Emergency Evacuation**

A list with emergency numbers must be readily available to first aiders and supervisors. Emergency numbers must be site specific and must display the nearest emergency facilities.

The Contractor shall identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the Contractor's OH&S plan, and communicated as part of induction training. It is the responsibility of the first aid worker, together with the construction supervisor, to make an assessment regarding the severity of injuries and which actions are appropriate. For example: transfer to a medical facility by ambulance or helicopter.

The Contractor must implement an emergency evacuation procedure on site to ensure that in case of an emergency, all staff will leave their place of work when the emergency siren is sound and proceed to the demarcated emergency assembly point. The emergency assembly point must display the sign "Emergency Assembly Point".

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

An evacuation route diagram must be displayed and visible at strategic points in buildings and on notice boards.

All staff working on site must be given awareness training on the emergency evacuation procedure and evacuation drills must be exercised to ensure all staff know the correct procedure to follow in case of an emergency.

d) Site Security

Certain areas where work must be carried out, is recognized unsafe areas and certain other areas may from time to time become unsafe, due to 3rd party actions. The Contractor must as far as reasonably possible anticipate unsafe areas and must ensure that his site staff is safe from 3rd party actions, which include but is not limited to:

- Unrests,
- Violent Demonstrations,
- Theft,
- Injury from 3rd parties at all times.

The Contractor must, when work is to be carried out in the above mentioned areas, make provision for security services to accompany site staff during the execution of their work, as the Contractor is responsible for the Health, Safety and Security of his own staff. The provision for security services must form part of the Contractors tender.

e) Personal Protective Equipment

Comply with General Safety Regulations, Section 2

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 engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered. The hierarchy of hazard elimination must be followed before the option of personal protective equipment is considered. The following hierarchy of controls must be followed:

- Elimination
- Passive Controls
 - Substitution – Using a cherry picker or man-lift instead of a ladder.
 - Engineering Controls – Installing barrier railings; Installing stairs instead of using vertical ladders.
- Active Controls
 - Administrative policies and procedures
 - Personal protective equipment

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 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

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

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 the employee.

The 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.

The Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on site. Any person found not wearing a reflective jacket on site must be removed from the site until such time as he is in possession of and wearing a reflective jacket. Reflective safety jackets shall be kept in good condition and any jackets that are ineffective must immediately be replaced by the Contractor.

f) Site Supervision

Comply with Construction Regulation, Section 8

The Contractor shall appoint a competent Construction Manager who shall be responsible for the construction activities and for ensuring occupational health and safety compliance on the construction site.

g) Working in Elevated Positions

Comply with Construction Regulation, Section 10

The Contractor shall ensure that a fall protection plan, developed by a competent person who is designated as the Fall Protection Plan Developer, is available on site and understood by all employees who will be working in elevated positions.

All employees working in elevated positions shall protect themselves from falls by wearing a full body harness and the lanyard shall be attached as far as possible above the head of the worker to a life line or other approved and tested anchor point.

In addition to obvious elevated work activities, work activities which include:

- Working on the edge of an excavation where there is a risk of falling into the excavation;
- Work on the edge of a vertical drop where there is a risk of falling;
- Work on top of tanker trucks and tanks;

shall be considered work in elevated positions and Section 10 of the Construction Regulations must be adhered to at all times. The hierarchy of controls must be implemented when such activities are carried out. As a minimum the employee must wear PPE, which shall include a full body harness attached to a restraint.

h) Structures

Comply with Construction Regulations, Section 11.

The Contractor shall ensure that all practicable measures are taken to prevent the uncontrolled collapse of new or existing structures or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work. No structure may be loaded in a manner which would render it unsafe.

When a structure is of temporary nature, all conditions as required by the Construction Regulations Section 12 - Temporary Works, must also be complied with.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

i) **Excavations**

Comply with Construction Regulations, Section 13

The Contractor shall ensure that all excavations are carried out under the supervision of a competent person who has been appointed in writing as Excavation Supervisor.

The Contractor must evaluate the stability of the ground before excavation work begins as well as during excavation work.

Excavations must be barricaded to prevent unauthorized access.

Material removed from excavations, as well as heavy machinery and construction vehicles, must not be closer than 1 meter of the edge of the excavation, to prevent additional loads on the excavation edge, which could cause cave-ins, to prevent construction vehicles from falling into the excavation and to prevent the accumulation of carbon monoxide gas inside the excavation.

The Contractor and its contractors must cause every excavation which is accessible to the public or which is adjacent to the public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –

- Adequately protected by a barrier or fence and as close to the excavation as is practicable; and
- Provided with warning illuminants or any other boundary indicators that are clearly visible at night or when visibility is poor.

People working in the excavation must be adequately protected from cave-ins, by means of protection systems such as trench boxed and shielding and must have a safe means of access into the excavation and egress from the excavation.

j) **Scaffolding**

Comply with Construction Regulations, Section 16, General Safety Regulations, Section 6 and SANS 10085 – The Design, erection, use and inspection of access scaffolding

The Contractor shall appoint a competent person in writing as scaffolding Supervisor. Scaffolding Inspectors and Scaffolding Erectors must be trained and found competent to carry out scaffolding work. It is important to note that only competent scaffold erectors are allowed to build the scaffolding. The scaffold inspector is not allowed to build the scaffold with the scaffold erector team.

Scaffolding shall be erected according to SANS 10085 and shall be tagged “safe for use” after inspection indicated that the scaffold is safe to use. The inspection of the scaffold shall be in writing and proof thereof shall be available for any user of the scaffold as well as for audit purposes.

Scaffold left erected while the Contractor is not in attendance, must be tagged with a “Not Safe for Use” tag and all reasonably practicable measures must be taken to prevent unauthorised access to the scaffold.

Scaffold must be inspected by the competent scaffold inspector on completion of the scaffold build, weekly thereafter or following severe weather conditions.

Hazards such as overhead power lines must be identified before the scaffold is build and must be reflected in the risk assessment.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

When using mobile scaffold, employees and materials must be removed from scaffold before moving the mobile scaffold. Hazards such as overhead power lines must be identified before moving mobile scaffold and must reflect in the risk assessment.

k) **Suspended Platforms**

Comply with Construction Regulation, Section 17, SANS 10295-2 - Suspended access equipment Part 2: Temporary suspended platforms (TSPs)

All suspended platform work must be carried out under the supervision of a competent appointed Suspended Platform Supervisor. Suspended platform erectors, operators and inspectors must be competent.

The Contractor must be in possession of a certificate of design for the use of the suspended platform system.

l) **Cranes**

Comply with Construction Regulation, Section 22, General Machinery Regulation, and Section 18.

Crane operators must be competent to carry out their work safely and must be in possession of a valid medical certificate of fitness, issued by an occupational health practitioner.

The wind factor should always be taken into consideration when operating cranes and that a wind speed device is fitted that provides the operator with an audible warning when the speed exceeds the design engineer specification. Upon noticing that the wind speed is equal or more than the specified speed limit, the operator should stop immediately.

m) **Construction Vehicles & Mobile Equipment**

Comply with Construction Regulation, Section 23, National Road Traffic Act, 1996

Construction vehicle operators must have received training to operate the class of construction vehicle or mobile equipment and must be in possession of an operator's card as proof of competency. Construction vehicle operators must be authorised in writing and have a medical certificate of fitness issued by an occupational health practitioner to operate the construction vehicle and/or mobile equipment.

n) **Electrical Equipment**

Comply with Construction Regulations, Section 24.

The Contractor shall take adequate steps to ascertain the presence of and guard against danger to workers from electrical cables or apparatus which is under, over or on the site.

The exact location of underground electric power cables must be determined before any excavators are used for excavation purposes.

The location of overhead electrical cables must be assessed when working with cranes and lifting equipment. Injury may be possible from touching the electrical cables with the crane boom, or from arching when the crane boom comes too close to the electrical cable.

All temporary electrical installations must be inspected at least once a week by a competent person and the records of the inspections must be recorded in a register which must be kept on site.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

Electrical machinery and extension cords must be in a serviceable condition and must be inspected on a daily basis before use on a construction site by the authorised operator and the inspection checklist must be kept on the construction site.

Comply with Electrical Installation Regulations.

All electrical installations shall be inspected and approved by an accredited electrical inspector and a valid Certificate of Compliance must be issued for the installation.

All electrical installations carried out on site (permanent and temporary) must be in accordance and comply with the Electrical Installation Regulations.

All power supplies and generating units must be fitted with a functional earth leakage device.

o) Temporary Storage of Flammable Liquids

Comply with Construction Regulation, Section 25 and General Safety Regulations, Section 4

The Contractor must ensure storage areas of flammable liquids are well ventilated and “No Smoking” signs are placed at the entrances and ventilation ducts of the storage areas. Firefighting equipment must be available in suitable positions around the storage areas.

The Contractor must ensure that good housekeeping is practiced in and around the flammable storage areas.

p) Water Environments

Comply with Construction Regulation, Section 26.

The Contractor must ensure that a lifejacket forms part of the employees PPE and is worn when the employee is exposed to the risk of drowning, by falling into water.

The risk assessment must make provision for the rescuing of persons in danger of drowning and for preventing employees from falling into the water.

When working over water environments, Section 10 of the Construction Regulations – Fall Protection will also apply.

q) Housekeeping

Comply with Construction Regulation, Section 27, Environmental Regulations for Workplaces, Section 6(3).

The Contractor shall ensure that suitable and acceptable housekeeping is continuously implemented and maintained on the construction site. Off-cuts and waste must be removed by the end of the shift or as soon as practicable.

r) Stacking & Storage of Material, Plant & Equipment

Comply with Construction Regulations, Section 28 and General Safety Regulations, Section 8.

The Contractor shall appoint a competent person in writing with the duty of supervising all stacking and storage operations on site.

Stacking shall only take place in areas specifically demarcated for this purpose. Circular items must be secured with wedges or chocks.

Items removed from a stack shall only take place from the top most layer of the stack.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION CLEARING HOUSE

Stacks shall not obstruct any fire extinguishing equipment, first aid equipment, electrical switchgear (DB Boxes) and ventilation or lighting installations.

Unstable stacks must be broken down immediately.

s) **Fire Precautions**

Comply with Construction Regulation, Section 29.

The Contractor must provide his own firefighting equipment that is within the service date and safe for use. Firefighting equipment must be on a register and inspected by a competent person who has been appointed in writing.

Suitable and sufficient fire extinguishing equipment must be placed at strategic locations and a sufficient number of firefighters must be available, which must be trained in the use of it.

t) **Intoxicating Liquor and Drugs**

Comply with General Safety Regulations, Section 2A.

The site limit for intoxication is set to zero to complement a vision of zero tolerance.

Any person found to be intoxicated, or consuming intoxicating liquor or illegal drugs, will not be allowed onto the premises and/or will be removed from the premises.

The Contractor has the right to test any person entering the premises for intoxicating liquor or illegal drugs and may refuse entrance on the basis of the outcome of the test.

The Contractor shall ensure that employees taking prescription medicine informs the Contractor of such and shall ensure that the side effect of such medicine does not constitute a hazard to the employee himself or people working in close vicinity to the employee.

u) **Confined Space Work & Tunnelling**

Comply with Construction Regulation, Section 15 and General Safety Regulations, Section 5.

The Contractor shall ensure that only authorized persons enter confined spaces.

An entrance log must be kept to ensure people are not left inside the confined space. Adequate air monitoring must be carried out before entering the confined space. When air monitoring indicated the oxygen to be less than 20% by volume, the confined space must be purged and ventilated to obtain a safe atmosphere or self-contained breathing apparatus must be used.

v) **Site Services**

The Contractor shall provide and maintain on the Site adequate and suitable sanitary services and a supply of potable water for all persons engaged in managing and working on the construction site and, if necessary, similar facilities elsewhere for such personnel off the Site.

i) Drinking Water

The Contractor must ensure that an adequate supply of potable drinking water is available for all persons engaged in managing and working on the construction site and, if necessary, similar facilities elsewhere for such personnel off the Site. Employees working in hot conditions must consume enough water per hour to prevent dehydration.

PROCUREMENT OF THE OPERATIONS AND MAINTENANCE OF AN OPEN ROAD TOLLING
SYSTEM IN THE GAUTENG PROVINCE, SOUTH AFRICA AND THE NATIONAL TRANSACTION
CLEARING HOUSE

Where water is unsafe for human consumption, it must be so indicated by means of adequate signage.

ii) Accommodation

The Contractor shall comply with the requirements of Construction Regulation 30 with regards to employee's facilities and accommodation. Reasonable and suitable living accommodation must be provided to employees who are far removed from their homes.

iii) Traffic Accommodation

The Contractor must ensure that the traffic is properly organized and controlled in any work situation by providing adequate signaling or other control arrangement to guard against the dangers relating to the movements of vehicles and plant. The plant and vehicles are equipped with an automatic acoustic reversing alarm.

When the Contractor is executing night work a permission should be sourced from the Engineer. The Contractor must put in place visible or reflective signs that can be seen by motorist at a distance. If a stop and go method is used flag persons must be properly trained on how to control the traffic. The Contractor must develop a clear Traffic Management Plan.