





**Site Specific Health and Safety Specification in terms of 2014 Construction Regulations 5.1(b)**

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| <b>Document Title</b>   | Site Specific Health and Safety Specification                                                              |
| <b>Client</b>           | eThekweni Transport Authority<br>Go- Durban                                                                |
| <b>Project Name</b>     | Construction of Cornubia Boulevard<br>C9 Corridor Work Package 6A                                          |
| <b>Contract Number</b>  | 1X-32452                                                                                                   |
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## REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS

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## 1) THE INTRODUCTION TO THIS HEALTH AND SAFETY SPECIFICATION

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. eThekweni Municipality has developed this Occupational Health and Safety Specifications with these minimum standards in mind and in certain stages the requirements of eThekweni Municipality exceeds the minimum legal requirements to follow best practices and to ensure a healthy and safe workplace for all.

ETHEKWINI MUNICIPALITY in no way assumes The Principal Contractors legal liabilities and responsibilities. The Principal 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 ETHEKWINI MUNICIPALITY requirements and should not be construed as all encompassing.

It is realized that The Principal 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 Principal Contractors Health and Safety management system, but for The Principal 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 Principal 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 (ETHEKWINI MUNICIPALITY). 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 Principal Contractor and any other Contractors working for ETHEKWINI MUNICIPALITY directly or through a Principal Contractor, are aware of the Occupational Health and Safety requirements when working on a ETHEKWINI MUNICIPALITY 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.

## 2) 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

**CIDB** – Construction Industry Development Board

**Client** – Any organization or person for whom construction work is performed. For the purpose of this document, the client is the eThekweni Municipality

**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.

**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

**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

**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 provides 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

**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 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

**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 ETHEKWINI MUNICIPALITY as defined on the front page of this document.

**WAH** – Acronym for Working at Heights.

### 3) 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. Further, it is expected that the Contractor should have a company Driving Policy and Procedure which incorporate the prohibition of mobile phones whilst driving or operating plant

### 4) 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 Principal 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).

### 5) 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 form 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

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 Principal 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 Principal 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 Principal 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.

## **6) 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 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, 8 or 9.

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 site. It is the intention of ETHEKWINI MUNICIPALITY to apply for a construction work permit as soon as The Principal 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 Principal Contractor's health and safety file for inspection purposes.

Where changes to the conditions given in the submission are required (i.e., Contractors, completion dates, increase in workers), a revised Annexure 1 will be submitted to the Department of Labour.

## **7) DUTIES**

Various duties are imposed on the Client, Designer, Principal Contractor and other Contractors by the Construction Regulation, 2014, Sections 5, 6 & 7. ETHEKWINI MUNICIPALITY 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.

## **8) MANAGEMENT AND SUPERVISION**

### **8.1 CONSTRUCTION MANAGER**

The Principal Contractor shall appoint a full-time competent person as the construction manager with the duty of managing all construction on the site.

The construction manager must be exclusively dedicated to the construction site

Proof of competency of the construction manager shall be incorporated in the H&S Plan; and as a minimum this shall include:

- Proof of professional training
- Proof of experience in the construction scope of work defined in the CHSS.
- Proof of experience in H&S management for as defined in the scope
- Proof of training in the OHSA, CR and evidence that a training provider certifies the construction manager to be familiar with the OHSA and with the applicable regulations made under the Act.

The construction manager shall be responsible to ensure that the following duties are executed and shall actively communicate with the Client-Agent in order to:

- Confirm and provide compliance and
- Discuss any compliance constraints which may be experienced.

The construction manager may be assisted by the safety officer and, where such an arrangement is planned, the H&S Plan of the Principal Contractor shall clearly define the respective duties of the construction manager and of the safety officer.

The construction manager shall be appointed in writing and reference to compliance of the Client specification must be stipulated in the appointment letter.

The construction manager shall present the site-specific health and safety plan, based on this health and safety specification to the client agent and shall discuss and amend the H&S Plan until finally approved by the client agent.

The construction manager shall ensure that the H&S Plan is reviewed and updated as work progresses.

The construction manager shall open and keep the site health and safety file to ensure that at all times this file is on site and available to an inspector, the client, the client's agent or contractor.

The construction manager shall provide contractors and sub-contractors with this CHSS.

The construction manager shall only approve the H&S Plan by a contractor and a subcontractor if there is sufficient evidence that the contractor:

- Has made sufficient provision for health and safety measures during the construction process.
- Has the necessary competencies to perform the construction work safely and
- Has made the necessary resources available to perform the construction work safely.

The construction manager shall ensure that all contractors appointed by the Principal Contractor have a compliant H&S Plan, prior to appointing the contractor and prior to allowing the contractor to start working on the site.

The Construction Manager shall ensure that contractors have evidence of both registration and good standing in terms of COIDA and shall not permit any contractor to start work on the site unless a valid Certificate of Good Standing is on site.

Additional to the requirements of the Construction Regulations, the Principal Contractors construction manager shall ensure that all sub-contractors appointed by any of the contractors of the Principal Contractor comply with the construction regulations and, in particular the construction manager shall:

- Assess and finally approve H&S Plans of all these sub-contractors; without such approval these contractors are not permitted onsite.
- Ensure that employees of these contractors are also inducted in the H&S induction program
- Audit these contractors monthly
- Stop unsafe work or work not in accordance with the approved H&S Plan.

The construction manager together with the safety officer shall ensure that daily inspections of the health and safety compliance of all contractors and sub-contractors on site are performed and documented in the Principal Contractor H&S File.

The construction manager together with the safety officer shall ensure that monthly site audits and document verification is conducted of all contractors and all sub-contractors on site.

The construction manager shall stop all construction work which is not in accordance with the CHSS or with the principal contractor's health and safety plan or which poses a threat to the health and safety of persons.

The construction manager shall ensure that, where changes are brought about to the design and construction on the site, sufficient health and safety information and appropriate resources are made available to any contractor to which the changes apply.

The construction manager shall hand over a consolidated health and safety file to the Client Agent upon completion of the construction work.

The construction manager shall ensure that a comprehensive and updated list of all the contractors on the site that is both those directly accountable to the principal contractor and those accountable to other contractors is kept in the H&S File. The list must refer also to the work

The construction manager shall ensure that a comprehensive and updated list of all the contractors on the site that is both directly accountable to the Principal Contractor and those accountable to other contractors is kept in the H&S File. The list must refer also to the work performed by the contractors, the date of the approved H&S Plan, the expiry date of the COIDA Letter of Good Standing, the last monthly audit date and the agreement between the parties.

The construction manager shall ensure that no employee accesses the worksite unless that employee is in possession of a valid medical certificate of fitness specific to the construction work to be performed and filed on site in the H&S File.

The construction manager shall ensure that site rules and regular communication processes are in place in order to obtain co-operation between all contractors on site.

The construction manager shall ensure that all persons on site have undergone the relevant site health and safety induction of the principal contractor

An up to date register of all employees on indicating the date of H&S induction, the expiry date of medical certificates of fitness and the employee's job title

The construction manager shall ensure that all fall risk work is performed in accordance with the fall protection plan and that at all times an updated fall protection plan is filed in the H&S file on site. Where fall recovery procedures are defined, the construction manager shall be responsible for ensuring that the necessary emergency engineering and administrative risk controls are in place, on stand –by and adequately controlled to ensure immediate assistance at all times when work is performed which poses a suspension risk. Where environmental conditions prevent safe work, the construction manager shall ensure timeous work stoppage.

The construction manager shall ensure that all work on site is performed under supervision of a competent person appointed by the principal contractor.

The construction manager shall ensure that all incidents are investigated and that the final reports thereof is assessed and approved in writing by the construction manager

The construction manager shall ensure that all Finding-and Audit Reports are assessed that corrective action is planned and executed and confirmed in writing.

## **8.2 CONSTRUCTION SAFETY OFFICER**

The PC will employ a competent full time H&S Officer for the duration of the contract. The H&S Officer's CV is to be submitted for approval by the H&S Agent or the Client. The PC is to ensure adequate resources are provided in order to undertake all responsibilities (i.e. mobile phone, computer and internet access, vehicle etc.)

Qualifications shall include at least Grade 12, SAMTRAC/NEBOSH/Diploma in H&S qualifications or similar together with additional appropriate short courses (i.e. Fall Protection Developer, Risk Assessor, Basic Fire Fighting and First Aider Level 1) with exposure to Civil and Building Construction that is appropriate given the level of project complexity and registration with SACPCMP. Any in-depth knowledge of legislative requirements and the application thereof is required. The site supervisor may not act as the H&S Officer.

The H&S Officer/s will be responsible for all H&S on the project.

- 1) Site staff and supervision, Contractors are to follow systems, instructions etc. given by the H&S Officer at all times.
- 2) No new workers or Contractors may commence work without approval or following the H&S Plan as submitted, and
- 3) No inductions of Contractor staff until the H&S documentation is approved by the H&S Officer.
- 4) The H&S Officer/s may not be removed or replaced without the approval of the H&S Agent.

## **9) RISK MANAGEMENT**

The Principal Contractor must follow a formal risk-based approach to ensure hazard control measures are implemented to an acceptable reasonable practical level. The Principal 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 Principal Contractor shall, before the commencement of any construction work or work associated with the aforesaid construction 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
- 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 Principal 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. ETHEKWINI MUNICIPALITY has conducted a Baseline Risk Assessment attached to, which must be used by The Principal 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 Principal Contractor.

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

ii) Risk Assessment Monitoring

The Principal 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 Principal 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 Principal 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**

ETHEKWINI MUNICIPALITY has 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 Principal 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 when preparing the Task Based Risk Assessments. During the briefing, the Client will brief tenderers about the hazards and risks that are associated with the anticipated construction work.

c) Continuous Risk Assessment

The Principal 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 or its Agent for audit purposes.

## **10) LEGAL COMPLIANCE AND DOCUMENT CONTROL**

The Principal 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 Principal 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.

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 Principal Contractor shall be conversant with and shall comply with these regulations.

All legal appointments of The Principal 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**

ETHEKWINI MUNICIPALITY will appoint the Principal 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 ETHEKWINI MUNICIPALITY and the Principal Contractor.

It is a requirement that the Principal 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 Principal 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:

| <b>Appointment description</b>                              | <b>Appointment required in terms of</b>       |
|-------------------------------------------------------------|-----------------------------------------------|
| Assistant construction manager                              | Construction Regulation 8(2)                  |
| Assistant construction supervisor                           | Construction Regulation 8(8)                  |
| Construction health and safety officer                      | Construction Regulation 8(5)                  |
| Construction manager                                        | Construction Regulation 8(1)                  |
| Construction supervisor                                     | Construction Regulation 8(7)                  |
| Construction vehicle, mobile plant and machinery supervisor | Construction Regulation 23                    |
| Drivers of construction vehicles and operators of plant     | Construction Regulation 23                    |
| Electrical installation and appliances inspector            | Construction Regulation 24                    |
| Emergency, security and fire coordinator                    | Construction Regulation 29                    |
| Excavation supervisor                                       | Construction Regulation 13                    |
| Fall risk protection supervisor                             | Construction Regulation 10                    |
| First-aiders                                                | General Safety Regulation 3                   |
| Fire fighting equipment inspector                           | Construction Regulation 29                    |
| Hazardous chemical substances supervisor                    | Hazardous Chemicals Substances Regulations 10 |
| Incident investigator                                       | General Administrative Regulation 9           |
| Ladder inspector                                            | General Safety Regulation 13(a)               |
| Lifting machines and equipment inspector                    | Construction Regulation 22                    |
| Occupational health and safety committee                    | OHSACT Section 19                             |
| Occupational health and safety representatives              | OHSACT Section 17                             |
| Person responsible for machinery                            | General Machinery Regulation 2                |
| Risk assessor                                               | Construction Regulation 9(1)                  |
| Scaffolding supervisor                                      | Construction Regulation 16                    |
| Stacking and storage supervisor                             | Construction Regulation 28                    |
| Structure's supervisor                                      | Construction Regulation 11                    |
| Temporary works supervisor                                  | Construction Regulation 12                    |
| Traffic management supervisor                               | OHSACT Section 9(1)                           |
| Traffic safety officer                                      | OHSACT Section 9(1)                           |
| Pressure equipment supervisor                               | Pressure Equipment Regulations                |
| Welding supervisor                                          | General Safety Regulation 9                   |

In addition to the above, the Employer requires that a Traffic Safety Officer be appointed. The appointed Traffic Safety Officer (TSO) shall be full-time employed by the Contractor for this specific purpose and able to fulfil his/her duties as determined by COLTO and the contract documentation. The TSO shall undergo a SAQA unit standard training eg. US 258923 or similar have at least 3 years' exposure to civil construction that is appropriate given the level of project complexity.

It is a requirement that The Principal Contractor shall provide ETHEKWINI MUNICIPALITY with an organogram of all Subcontractors 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 Principal 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 Principal Contractor may at his own discretion or based on the recommendations of the Client's Construction H&S Agent 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 Principal Contractor or his sub-contractors, formally 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 Principal 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 Principal 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 Principal 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 managements appointed members may not exceed the number of OH&S representatives on the committee.

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

**a) Construction Plant & Equipment**

The Principal Contractor shall maintain all items of plant and equipment necessary to perform the work in a safe condition. All plant must be accompanied by a recent service history inspection report as specified by the manufacturer and duly signed off by a competent mechanic and kept on file. The Principal Contractor shall further ensure compliance with the Noise Induced Hearing Loss Regulations and all equipment identified that has not been tested and marked for noise emissions will result in having to be tested at the Contractors expense. Failure to do so within a reasonable time period will result in such equipment being removed from site.

ETHEKWINI MUNICIPALITY or its Agent reserves the right to inspect items of plant and equipment brought to site and used on site by The Principal 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 Principal Contractor will be advised of such observation/inspection , and The Principal Contractor shall be required to repair, make safe or remove such item from operation and replace it with a safe and adequate substitute.

The Principal 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 manufacturer's recommendations eg. A Tractor-Loader-Backhoe (TLB) and Excavator are not deemed lifting machinery, therefore are prohibited from being used as such unless modifications have been made to the Plant, tested, and approved by an LMI, Mechanical Engineer, D.o.L or specified by the Original Equipment Manufacturer.
- ✚ 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 Principal 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.



## **12) OCCUPATIONAL HEALTH AND HYGIENE**

### **a) Medical Fitness for Duty**

All contractor employees shall undergo medical examinations and be certified fit for duty by an Occupational Health Practitioner 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.

It is recommended and in the best interest of The Principal 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/worksites, The Principal 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 level 1 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 WCI 2 forms be partially completed with the Employers' details.

### **c) Hygiene Facilities**

The Principal 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 Principal Contractor shall ensure that the facilities are kept clean at all times, either through a service provider or self-employed persons. The Principal 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. The sheltered eating areas shall be suitably constructed and in close proximity to the workforce. Under no circumstances will workers be allowed to eat or rest in bushy areas or under poorly constructed make-shift shelter.

### 13) WASTE MANAGEMENT

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

The Principal 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 Principal 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.

### 14) HAZARDOUS SUBSTANCE MANAGEMENT

The Principal 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 Principal 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.

| PRODUCTS or SUBSTANCES | POTENTIAL HEALTH OR OTHER RISKS                                                                                                                                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cement                 | <ul style="list-style-type: none"><li>• Hand mixing may occur, 50kg bags are an ergonomic risk from handling.</li><li>• Pumping of concrete may produce extensive vibration, extended hours of work, and potential eye, skin and respiratory irritant from dust exposure, chromates.</li></ul> |

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lime</b>                        | <ul style="list-style-type: none"> <li>Hydrate is an odorless white or grayish-white powder. Contact can cause irritation to eyes, skin, respiratory system, and gastrointestinal tract</li> <li>Long-term inhalation exposure may cause permanent damage</li> </ul>                                                                                                                                                                              |
| <b>Retro-reflective Road paint</b> | <ul style="list-style-type: none"> <li>High levels of volatiles, Products have narcotic effect</li> </ul>                                                                                                                                                                                                                                                                                                                                         |
| <b>Herbicides and ant poison</b>   | <ul style="list-style-type: none"> <li>Type not specified but will be used. Principal Contractor to ensure use of MSDSs and appropriate protection measures</li> </ul>                                                                                                                                                                                                                                                                            |
| <b>Petrol/diesel/lubricants</b>    | <ul style="list-style-type: none"> <li>Potentially a above ground diesel bowzer on site. Fire, spillage, fumes</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| <b>Asphalt</b>                     | <ul style="list-style-type: none"> <li>Hot material can cause severe eye and skin burns on contact</li> <li>Hydrogen sulfide from heated material can accumulate in vapour space of tanks and containers</li> <li>Contact between heated material and water can cause a violent eruption</li> <li>Fumes from heated material can cause irritation to the eyes, skin, and respiratory system and can increase susceptibility to sunburn</li> </ul> |
| <b>Bitumen</b>                     | <ul style="list-style-type: none"> <li>During heat application produces asphalt fumes that results in nose and throat irritation. May cause dizziness</li> </ul>                                                                                                                                                                                                                                                                                  |
| <b>Sealing Agents</b>              | <ul style="list-style-type: none"> <li>Contact with products may result in Dermatitis and occupational respiratory illness or disease from prolonged exposure</li> </ul>                                                                                                                                                                                                                                                                          |

## 15) CONTRACTORS

### 1. Consultations, Communications and Liaison

OH&S liaison between the Employer, The Principal Contractor, The 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 principal 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 Principal Contractors' most senior manager on site shall be required to attend all OH&S meetings.

## **2. Operational Procedures**

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

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

## **3. 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 Principal Contractor has implemented and is maintaining the agreed and approved OH&S Plan.

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

The Principal 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 Principal 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**

The Principal 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 Principal Contractor shall furthermore ensure that each Contractor's Health & Safety Plan is being implemented by conducting periodic audits at intervals mutually agreed between The Principal 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.

#### **4. Project Health and Safety Management Plan**

As per Section 5(1) (l) and Section 7(1) (a) of the Construction Regulations of 2014, The Principal Contractor shall develop, implement and administer a Health and Safety Management Plan. The Plan shall be in writing and shall be negotiated between The Principal Contractor and ETHEKWINI MUNICIPALIT and must be approved by ETHEKWINI MUNICIPALITY 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:

##### **1. Introduction Mission**

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

##### **2. Leadership and Commitment Values**

supporting commitment  
Roles, Responsibilities and Accountability

##### **3. Hazard and Risk Management Process**

Effective  
Consultation  
Planning

##### **4. Contractor HSE Alignment**

Sub-  
Contractors  
On-Site

##### **5. Learning and Competency**

Project HSE Training and Competency  
Requirements Contractor & Sub-Contractor Duties

##### **6. Minimum Training Requirements**

Medical and Induction  
Employee details  
Visitors to site  
Induction

##### **7. Involvement, Communication and Motivation**

Safety Meetings  
Health & Safety Behavior  
Information and Learning

##### **8. 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

### **9. 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

### **10. Performance Tracking and Accountability**

Positive Performance Indicators  
Workplace Observations and Audits  
Reporting

### **11. Incident Management Emergency**

Preparedness and  
Response Incident Management  
Injury Management

### **12. Waste Management**

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

## **5. Project Health and Safety File**

The Principal 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.
- ❖ Copy of Work Permit
- ❖ Proof of COID registration (Letter of Good Standing)
- ❖ Contractor Health and Safety Policy statement signed by management
- ❖ Mandatary 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
- ❖ Employee list including copy of IDs and medicals
- ❖ Project specific Health and Safety Management Plan agreed with the Employer
- ❖ 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
- ❖ 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 Mandatary Agreements
- ❖ Sub-contractor appointments which shall include the type of work The Principal Contractor is appointed for

## 6. Contracting Philosophy

Any site-specific hazards and safety management expectations will be made known to The Principal 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 Principal Contractor must apply during this contract with regards to Occupational Health and Safety. The Principal Contractor shall apply, implement and enforce the minimum OHS Act & Regulations and SANS Codes requirements.

## 7. Workers Compensation Registration

The Principal 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. No Contractor may work under the Principal Contractors Compensation registration number. If required, the Principal Contractor may assist an SMME with their registration with the Compensation Commissioner. However, such Contractors will not be able to commence work until proof of registration or Letter of Good Standing has been received **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 Principal 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 Principal Contractor has made the unsafe situation or activity as safe as practicable possible.

## 8. Indemnity by Contractor

The Principal 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 Principal Contractor's workforce as a result of a dispute between all or any of the Principal Contractor's workforce and The Principal Contractor; or
  - all or any of the Principal 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 Principal Contractor's personnel."

## **9. The Principal Contractor Conduct**

Guidelines to the most important rules that shall be implemented and maintained by the Principal 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.
- Always be alert of construction vehicles as well as traffic. Never turn your back to oncoming traffic, always have a line of sight.

## **10. Principal Contractor and Contractor Management**

The Principal 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 Principal 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.

## **11. Public Health and Safety**

The Principal 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:

1. Non- employees entering the site for whatever reason
2. The surrounding community
3. Passers-by to the site.

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

### **RESIDUAL DESIGN RISKS**

The summary of residual risks provided is to direct the Principal Contractor towards risks that he may not be aware of during tender stage and while developing his formal risk assessments for the project. To that end note that no other residual risks remain which the Designers judged as significant and unusual other than those risks that a competent Contractor can reasonably be expected to know or deduce from the documents prepared for this project and supplied to them.

| <b>No</b> | <b>Residual Risks Identified</b> | <b>Recommended Mitigative Measures</b>                                        |
|-----------|----------------------------------|-------------------------------------------------------------------------------|
| 1.        | Local Labour usage               | The H&S management, training and mentoring of local labour during the project |

|    |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. | Scope of works | <p>Adherence to the recommended detailed sequencing of the construction process and the inclusion in the H&amp;S Plan and associated risk assessment</p> <ul style="list-style-type: none"> <li>→ Removal of rubble and other waste products to an approved dump site ( site clearance).</li> <li>→ Bulk earthworks.</li> <li>→ Proving of existing services.</li> <li>→ Relocation of existing services.</li> <li>→ Construction of foul water drainage system.</li> <li>→ Construction of concrete pipe sleeves.</li> <li>→ Construction of watermain line and connection to existing watermain.</li> <li>→ Construction of stormwater system.</li> <li>→ Installation of ducts.</li> <br/> <li>→ The construction of a new road link flanked by the proposed Dube West and Dube East roads. Comprising of the following: <ul style="list-style-type: none"> <li>▪ C9 IRPTN bus route (RoW), single/double lanes in each direction, chainage 0 - 1630</li> <li>▪ C9 Mixed Use lanes (MU), minimum two lanes in each direction, chainage 0 – 1630</li> <li>▪ 2 Station Platforms</li> </ul> </li> <li>→ Construction of sidewalks and medians of varying widths, using brick pavers, asphalt and concrete.</li> <li>→ Construction of barrier kerb and cast in-situ channel/fillet.</li> <li>→ Landscaping.</li> <li>→ Installation of new street lighting.</li> <li>→ Traffic accommodation and maintenance of existing accesses.</li> <li>→ Installation of traffic signals</li> </ul> |
|----|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 17. INCIDENT MANAGEMENT

The Principal 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 Principal Contractor must implement a procedure for reporting and investigating accidents, incidents and near misses. The Principal 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 Principal 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 Principal 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.

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

Although the accident/incident is reported to the Client, the Principal 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 Principal 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 Principal 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 ETHEKWINI MUNICIPALITY Project Manager and or the ETHEKWINI MUNICIPALITY OHS Specialist.

Investigations must be completed for:

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

#### **(b) Incident Reporting**

The Principal 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 Principal Contractor shall update monthly the Disabling Injury Frequency Ratio (DIFR) and display this information on a signboard at the site office.

The Principal Contractor is responsible for collecting, recording, calculating, and reporting his and his sub-contractors Health & Safety statistics to the ETHEKWINI MUNICIPALITY 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 ETHEKWINI MUNICIPALITY 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.

## **18. PROJECT SPECIFIC CONSTRUCTION REQUIREMENTS**

The clause contains specific requirements for Contract Cornubia Boulevard C9 Route- 1X-32452 which must be adhered to in addition to minimum legislative requirements.

## 1) **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.
- 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.
  - Existing services, e.g.
- Temporary electrical installations
- Adjacent land uses/surrounding property exposures ie. Dust and noise exposure to passing traffic
- 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 noise
- Exposure to vibration
- HIV/Aids
- 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
- 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:
  - 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
    - Backfilling of trenches
    - Protection against flooding
    - Gabion work
    - Work adjacent or in proximity of traffic.
    - Working in fall risk positions
    - Bulk mixing plant, where applicable
    - Environmental impacts such as pollution of water, air or soil

- Emergency Management ie. Traffic backlogs caused by accidents; no separate route allowed for emergency vehicles.

## 2) **Daily Site Attendance Register**

The Principal 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 Principal 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.

## 3) **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 Principal Contractor shall identify based on the risk profile and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in The Principal Contractor's OH&S Plan 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 Principal 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".

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.

The procedure shall detail the response plan in relation to the works, and include at least (but are not limited to) the following key elements:

Appointment of a competent Emergency Response Co-ordinator

The Principal Contractor will be responsible for developing and implementing a suitable Fire Management Plan for fires at the Site Office, Veld Fires, Accommodation and Storage Areas.

- ✓ Public injury or Motor vehicle accidents.
- ✓ Falls from fall risk position – repairs to underpass structure.
- ✓ Serious injury to workers (medical or work-related);
- ✓ Snake Bites
- Excavation collapse
- Plant - Roll Over's
- Any other major risks identified during risk assessments.

Traffic backlogs caused by accidents may result in secondary accidents and severe injuries therefore the Contractor must ensure that as part of their Emergency Management Planning that 24 hrs Towing Facilities are available and haul/ access routes prepared for emergency vehicles.

The Emergency Management Plan is to ensure the inclusion of local service providers where possible. Such arrangements should be made with these persons prior to the commencement of the project. The general principals of emergency management are to be applied as it applies to the hierarchy of control and management and shall be practised at least every 6 months.

The Contractor is to prepare a site layout drawing to indicate at least the following:

- ✓ The positions of site office, toilets, drinking water and worker rest areas, pedestrian walkways;
- ✓ Indicate the positions of emergency personnel and equipment (fire, first aiders);
- ✓ Provision of construction vehicles and pedestrians (indicate parking)
- ✓ Storage areas (materials and equipment, waste, HCS etc.)
- ✓ Access and egress to site for deliveries
- ✓ Emergency assembly point and routes

Such layouts are to be updated regularly throughout the project.

#### **4) 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 3<sup>rd</sup> party actions. The Principal Contractor must as far as reasonably possibly anticipate unsafe areas and must ensure that his site staff is safe from 3<sup>rd</sup> party actions, which include but is not limited to:

- Unrests,
- Violent Demonstrations,
- Theft,
- Injury from 3<sup>rd</sup> parties at all times.

The Principal 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 Principal Contractor is responsible for the Health, Safety and Security of his own staff. The provision for security services must form part of The Principal Contractors tender.

The Principal Contractor must give consideration to the neighbouring communities, possible strike action, the safety and security of personnel and equipment. Therefore, the appointed Community Liaison Officer and H&S Officer must form part of the Project Steering Committee and appropriate precautionary measures must be planned for.

#### **5) Personal Protective Equipment**

Comply with General Safety Regulations, Section 2

The Principal 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 used as 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 Principal 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 Principal Contractor maintain the said equipment, that he instructs and trains the employees in the use of the equipment and ensures that the prescribed equipment is used by the employee/s.

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

The Principal Contractor shall include in his OH&S Plan the PPE he intends issuing to his employees for use during construction, the PPE management procedure 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 Principal 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 Principal Contractor.

The wearing of the identified SANS approved PPE at all times is non-negotiable. The Principal Contractor shall ensure that all workers (including Contractors) are issued with and shall wear:

- Hard hats; (*where exposed to fall risk* ie. repairs to underpass structures) • Protective footwear.
- Overalls that ensure worker visibility.
- High Visibility Vests
- Eye protection;
- Hearing protection;
- Respiratory protection (minimum of FF2 and or respirators), and
- Any other necessary PPE identified from MSDSs and/or risk assessments.

Adequate quantities of PPE shall be available. Any person (including Client, Designers etc.) found on site without the necessary PPE will be removed from site until the PPE is supplied and worn.

## 6) Site Supervision

Comply with Construction Regulation, Section 8

The Principal Contractor shall appoint a competent Construction Manager and registered with the SACPCMP as PrCM or ECSA as PrEng or PrTechEng who shall be responsible for the construction activities and for ensuring occupational health and safety compliance on the construction site.

## 7) Working from Fall Risk Positions

Comply with Construction Regulation, Section 10

The Principal Contractor shall ensure that a Fall Protection Plan, developed by a competent person who is designated as the Fall Protection Plan Developer and registered Institute of Working at

Heights or similar, is available on site and understood by all employees who will be working from fall risk positions. All employees working from fall risk 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 lifeline 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 trucks;

shall be considered work from a fall risk 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.

The Principal Contractor shall further ensure that method statements, appropriate risk assessments, safe work procedures and training are to be available prior to work commencing. All workers exposed to fall risk must undergo formal SAQA accredited "working from height/fall risk position" training.

The focus for working from a fall risk position shall include fall restraint systems where possible except during assembling or dismantling top components or where it is not deemed safe. The relevant SANS codes are to be applied as they apply to the works and the project, such as:

- ❖ SANS 10085
- ❖ SANS 50355
- ❖ SANS 50361

Should part of the works be contracted out, a competent Contractor is to be appointed and submit documentation according to the project requirements. The Principal Contractor is to note if such work is to be contracted to specialists in the H&S Plan. The Plan is to be developed by and work managed by a competent person for the duration of the project.

The following aspects must be included:

- ✓ Notices to be posted
- ✓ Restrictions or stoppage when weather conditions are deemed hazardous
- ✓ Permit system for working from a fall risk position
- ✓ Prevention of falling tools or equipment

All workers are to be in possession of valid certificates of fitness that extend for the duration of the works. Note the requirements in the section relating to medical surveillance and the relevant SANS codes as applied to the works and the project. Registers and all relevant documentation are to be placed in the H&S file.

The Fall Protection Planner shall have the following qualifications as a minimum:

- Fall Protection Planner (Accredited SAQA Unit Standard 229994)

## **8) Structures**

Comply with Construction Regulations, Section 11.

The Principal 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.

## **9) Excavations and Pilling**

Comply with Construction Regulations, Section 13

The Principal 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 Principal Contractor must ensure that a procedure for managing excavations is provided as an addendum to the H&S Plan describing how excavations are to be managed for excavations depths ranging greater than 1,5 meters where major cuts occur. Excavation method statements are to be approved by the Engineer and associated risk assessments are required. A competent person is to be appointed for managing all excavations. All equipment and ground conditions are to be checked daily and prior to work commencing. Danger tape may NOT be used to barricade excavations. Cognisance is required of the surrounding area and increased levels of protection are required where work is in the vicinity of members of the public. Therefore, excavations must be barricaded to prevent unauthorized access. In proximity to residential areas, and wherever ordered, the Contractor shall provide and fix to the demarcation fencing approved and substantial plastic square mesh to act as an additional childproof barrier and shall be removed on the completion of the works.

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. 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.

Barricades can take many forms but should always be visible and portable. The objective of a barricade is to demarcate the work area, or an area restricted to site vehicles only. For small amounts of shift in alignment one barricade sign combination should be used. If the shift in alignment is one lane width, two or more barricade sign combinations should be used.

Barriers must be sufficiently fixed to give physical protection to traffic and workers alike. Typical barriers are W-section steel or portable shaped concrete (New Jersey). The alignment of barriers shall be defined for nighttime visibility by GUARDRAIL DELINEATORS or similar devices. Special effort should be taken to make the face of concrete section barriers visible, particularly at night and under conditions of bad visibility.

Barriers should be installed in the following cases:

- (a) Where the fill is more than 1 m with no recovery area;
- (b) Where obstructions appear to be more dangerous than a guardrail would be;
- (c) In restricted areas between opposing flows of high volumes of traffic; (d) As determined by the risk profile

## **Pilling Works**

The Principal Contractor shall ensure where pilling is required that the works undertaken by a specialist contractor. A works risk assessment and safe works procedure must be approved by Principal Contractor evidence of such approval must be shared with the Agent before works commences.

## 10) 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 Principal 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. The Principal Contractor must further ensure that all scaffolding working platforms are spaced at 3 meter intervals.

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 Principal 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.

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.

## 11) Lifting Equipment

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

Should any form of lifting device or mobile crane be used during the project for deliveries, moving of supplies or equipment, the appropriate documentation must be made available. Method statements, risk assessments, safe work procedures, load tests certificates and training are to be available prior to work commencing. A procedure for managing loads and lifting must be made available as an addendum to the H&S Plan. The equipment must always be operated within its capability and if in any doubt, the Operator should consult with the operations and maintenance manual supplied by the Original Equipment Manufacturer. A Tractor-Loader- Backhoe (TLB) and Excavator are not deemed lifting machinery therefore are prohibited from being used as such unless modifications have been made to the Plant, tested and approved by an LMI and Mechanical Engineer or specified by the Original Equipment Manufacturer.

All lifting tackle must be suitable colour - coded and tagged for the respective quarter of the year and this strictly adhered to. All lifting tackle not conforming to this requirement will be removed from site until conformance is achieved. All employees conducting rigging activities must be deemed competent to perform such a function.

The following requirements will apply to lifting tackle:

- (a) Manufactured of sound material, well-constructed and free from latent defects.
- (b) Clearly and conspicuously marked with an identity number.
- (c) Maximum mass load factor of safety:

|                     |         |
|---------------------|---------|
| Natural fibre ropes | 10(ten) |
|---------------------|---------|

|                                        |           |
|----------------------------------------|-----------|
| Man-made fibre ropes and woven webbing | 06(six)   |
| Steel wire ropes – single rope         | 06(six)   |
| Steel wire ropes – combination slings  | 08(eight) |
| Mild Steel chains                      | 05(five)  |
| High tensile/alloy steel chains        | 04(four)  |

- a) Steel wire ropes must be discarded (not used any further for lifting purposes) when wear and corrosion is evident and must be examined by a competent person every three months for this purpose and the results recorded in a designated log book.

## 12) Construction Vehicles & Mobile Equipment

"Construction plant" entails all types of plant including cranes, piling frames, boring machines, excavators, draglines, dewatering equipment and road vehicles with or without lifting equipment.

When work is being undertaken in such a position that it is possible for construction plant or its load to come within 3 meters of live high-voltage equipment, the Electrical Officer (Contracts) shall be consulted. He will arrange for an Authorized Person to supervise the work and to ensure that the plant is adequately earthed. The Electrical Officer (Contracts) will decide whether further safety measures are necessary. Comply with Construction Regulation, Section 23, National Road Traffic Act, 1996

When loads are handled by cranes, non-metallic rope hand lines shall be used, affixed to such loads so as to prevent their swinging and coming within 3 meters of live high-voltage equipment.

The access to and possession of the Site shall not be exclusive to the Contractor. The limitations are set out below:

- (a) Traffic and the community in general must be accommodated within the road reserve during construction using minor detours Stop/Go facilities working in half widths; and
- (b) The Contractor shall be required to liaise with, cooperate with and accommodate all other Contractors working on the site, particularly when such other Contractors are working in the same area simultaneously

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 authorized in writing and have a medical certificate of fitness issued by an occupational health practitioner to operate the construction vehicle and/or mobile equipment.

The Principal Contractor must further ensure that no worker may be transported in, or on the rear of construction vehicles (*bakkies included*), or with plant and materials to, on, or from site. The number of passengers in any vehicle is limited to what is stated on the license disc.

Vehicles used to transport workers to, from, or on site, shall have secure seats and be covered. The Principal Contractor must indicate in their OHS Plan what type of transport is envisaged and how this will be managed. Close control of plant and equipment is required, including that of all appointed Subcontractors. All plant must be accompanied by a recent service history inspection report as specified by the manufacturer and duly signed off by a competent mechanic and kept on file.

Daily monitoring of all plant and equipment is required prior to commencing work. Full lists of hired and own plant are to be available at the H&S Agent's audit. All daily inspection records are to be kept in the H&S file or Contractors where plant and equipment is brought onto site. Registers are not to be more than 1 week behind.

Only competent, medically fit plant operators are to be used therefore SAQA unit standard training must be undertaken by a registered training Provider for all plant on site, including Tipper

Operators. Further, valid PDP's are required for all Construction Vehicles used on open public roads and medical certificates of fitness issued for all operators. Any plant or slings used to lift plant or material require annual load testing by an AIA, and all certificates must have the testers LMI/E number. Operators are to be adequately trained and certified to operate mobile cranes or crane trucks. Certificates and registers are to be placed in the H&S file

### **13) Electrical Equipment**

Comply with Construction Regulations, Section 24.

The Principal 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. 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 authorized 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.

### **14) Services**

The Principal Contractor must give consideration to and the approximate positions of known services should be indicated on the drawings for information purposes only. The position of existing services cannot be guaranteed. The Principal Contractor shall take all necessary steps to ascertain the exact location of the existing services before commencing any section of the works and shall exercise the greatest care when working in the vicinity of such services. The Principal Contractor must establish the position of existing services where applicable by contacting the authority or authorities responsible for such services, by using specialized equipment and opening up by hand.

The Principal Contractor shall so carry out all his operations as not to encroach on, or interfere with, trespass on, or damage adjoining lands, properties, road structures, pipelines, places and things, in the vicinity of the works and so as not to interfere in any way at any time with the smooth and continuous operation of the existing facilities.

### **15) Temporary Storage of Flammable Liquids**

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

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

## 16) Hazardous Chemical Substances

The following lists of products or substances are those which have been identified as likely to be used on the project or generated during the course of construction. This list is not inclusive and other products may be considered. Where the Principal Contractor is likely to supply the product as the product has not been specified, material safety data sheets (MSDSs) need to be considered prior to all selections.

| PRODUCTS or SUBSTANCES      | POTENTIAL HEALTH OR OTHER RISKS                                                                                                                                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cement                      | Hand mixing may occur, 50kg bags are an ergonomic risk from handling.<br>Pumping of concrete may produce extensive vibration, extended hours of work, and potential eye, skin and respiratory irritant from dust exposure, chromates. |
| Lime                        | Hydrate is an odorless white or grayish-white powder. Contact can cause irritation to eyes, skin, respiratory system, and gastrointestinal tract<br>Long-term inhalation exposure may cause permanent damage                          |
| Retro-reflective Road paint | High levels of volatiles, Products have narcotic effect                                                                                                                                                                               |
| Herbicides                  | Type not specified, but will be used. Principal Contractor to ensure use of MSDSs and appropriate protection measures                                                                                                                 |
| Petrol/diesel/lubricants    | Potentially a above ground diesel bowzer on site. Fire, spillage, fumes                                                                                                                                                               |
| Sealing Agents              | Contact with products may result in Dermatitis and occupational respiratory illness or disease from prolonged exposure                                                                                                                |

## 17) Testing Laboratory and the use of Radioactive Equipment

A joint laboratory may be required, or a service provider will be appointed for the project. The service provider will be seen as a Contractor, or where appointed as a joint laboratory, as a Principal Contractor. All the H&S rules and requirements are to be met. Where appointed as a Principal Contractor, the H&S Agent will be responsible for approving the initial H&S Plan and ensuring ongoing compliance. All other requirements of the construction Principal Contractor are to be met. Each Principal Contractor is to be familiar with the H&S rules of each party. Mandatory agreements, Inductions and emergency requirements among other are to be addressed and managed to ensure limitation of H&S risks.

The use of radioactive equipment for the measuring of compaction parameters shall conform to the requirements of the "Code of Practice for the safe use of soil moisture and density gauges containing radioactive sources" as published by the Department of Health: Directorate: Radiation Control Soil revised September 2001. The Principal Contractor must ensure that the use of a Nuclear Gauge (Troxler) is safely managed on site by ensuring that a suitable risk assessment and safe work procedure is conducted on the use of the troxler, the operators suitably trained by the manufacturer or similar, workers made aware of the risk exposure and a Radiation Protection Officer appointed. A valid calibration certificate must also be on file.

## **18) Batch Plants**

Whichever form of Batch Mixing Plant is used, for mixing concrete or slurries for surfacing, guards and protection of nip points, emergency stops etc. are to be appropriately managed by competent supervision. Edge protection, movement of plant and dust management are required including disposal of hazardous chemical waste. The layout of the mixing plant and movement of plant is to be provided on an appropriate drawing.

## **19) Housekeeping**

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

The Principal 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.

## **20) Stacking & Storage of Material, Plant & Equipment**

The Contractor shall not stack any material closer than 3 m from the centre line of any railway line without prior approval of the clients rep/railway agents

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

The Principal 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 topmost layer of the stack.

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.

## **21) Fire Precautions**

Comply with Construction Regulation, Section 29.

The Principal 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, within the plant and a sufficient number of firefighters must be available, which must be trained in the use of it.

## **22) 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 and to that end the Principal Contractor is to have a Drug, Alcohol and Disciplinary policy available to manage such instances.

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 Principal 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 Principal Contractor shall ensure that employees taking prescription medicine informs The Principal 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.

## **23) Site Services**

The Principal 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 Principal 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.

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

### **ii) Accommodation**

The Principal 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 Principal 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 Principal Contractor is executing night work, permission should be sourced from the Engineer. The Principal Contractor must put in place visible or reflective signs that can be seen by motorist at a distance. Where traffic calming methods are utilized flag persons must be properly trained and a clear Traffic Management Plan developed for implementation.

The Principal Contractor shall ensure that as little inconvenience as possible is caused to members of the public and traffic flow. All halting of traffic will require the prior approval by the Engineer and must be pre-arranged with the appropriate traffic authorities. In all dealings with the public the Principal Contractor shall bear in mind the public's right to enjoy the use of the road, and the Employer's desire to interfere as little as possible with this right. At all points of contact with the public, the Principal Contractor shall deal with deliberate courtesy and understanding in any discussions or disputes.

The failure or refusal of the PC to provide solid barriers or traffic signs at the proper time, or to take the necessary precautions for the safety and convenience of public traffic as specified or instructed by the Employer's Agent, shall be sufficient cause for the suspension of all work under this Contract

without any additional compensation to the Contractor until the required accommodation of traffic has been completed to the satisfaction of the Employer's Agent.

The following signage shall be provided as a minimum where construction work is undertaken in, next to or close to a public road:

- a) "Construction work ahead" sign at least 45 meters before the start of the construction work.
- b) "Lane narrows" sign 30 meters before the start of the construction work;
- c) "Keep right/left" sign 15 meters before the start of the construction work and again where the tapering begins; and
- d) Delineators and cones every 5 meters for the entire stretch of construction work.

Where construction work includes excavations in or next to a public road, warning lights or visible boundary indicators shall be provided after dark or when visibility is poor.

The maintenance of all signage and especially those that is suitable after dark shall be duly managed

Where appropriate duly trained flag persons shall be deployed a good distance ahead of areas where traffic is deviated, or lanes closed off. These flag persons to be managed assertively to ensure that they add optimal value, and should they not do so they should be retrained and if necessary, replaced.

The community liaison officer (CLO) shall also be sensitised on the optimal management of traffic and the risks involved and then be instructed to increase community awareness through talking to all stakeholders including the distribution of suitable information brochures.

## **24) Safety Conflict**

Where any conflict exists between the requirements of this H&S Specification, the Site Rules, Statutory requirements, or Regulations the higher standard must apply unless such conflict is brought to the attention of the H&S Agent and a direction provided. The Principal Contractor is deemed to have allowed for the higher standard.

The Principal Contractor is legally responsible for ensuring that they conform to all applicable aspects of the Occupational Health and Safety Act 85 of 1993 and Regulations (as amended) and other relevant Acts and Regulations. If in dispute with this H&S Specification and other legislation the most stringent requirement must apply.

## **25) Welding, flame cutting or similar operations**

Should any welding work be undertaken as part of emergency repairs to plant and equipment on site or as part of the construction activities, the principal contractor must ensure that:

- A competent person will be appointed to supervise welding, flame cutting or similar operations on site.
- The following rules will govern all welding and flame cutting or similar operations:
  - The welder will be trained regarding the safe use/operation of the equipment.
  - The welder and his assistant will be provided with effective and appropriate personal protective equipment and/or clothing.
  - Cables and electrode holders will be effectively insulated.
  - The workplace will be effectively screened off to prevent bystanders from being affected by the welding rays or they will be provided with personal protective equipment.
  - Special precautions will be taken where welding is undertaken in confined spaces e.g. proper and sufficient ventilation will be provided.
  - In wet or damp conditions, the welding equipment and the welder will be properly insulated and someone will be on standby to assist in the event of any emergency.
  - A qualified person will certify in writing that it is safe to enter and work in a specific confined space before welding or flame cutting is undertaken.



- No welding, flame cutting, grinding, soldering or similar work shall be undertaken in respect of any drum, vessels or similar object or container where such object or container-
  - ✓ is completely closed, unless the rise in internal pressure cannot render it dangerous; or
  - ✓ contains any substance which, under the action of heat may explode or react to form dangerous or poisonous substances.
    - Where pressure vessels/welding cylinders containing oxygen or acetylene are transported or used, the proper precautionary measures will be taken against bumping, falling, rolling etcetera.
    - Gas welding hoses may only be joined with approved connectors and clamps.
    - No oil or grease may be applied to oxygen valves and fittings.
    - It is a sound practice to store pressure vessels and/or welding cylinders vertically and to secure them by means of a chain.
    - Acetylene cylinders may never be inclined in excess of 45°.
    - Proper and adequate fire prevention measures will be instituted and maintained for as long as the welding continues.
    - Where explosive and/or flammable vapours are present welding will only be done under “hot work” permits.

## **26) Working under or close to overhead power lines**

The principal contractor shall ensure that the following requirements are duly considered and adhere to:

### **Working in inclement weather**

The principal contractor shall implement an early warning system to identify inclement weather and to prevent such weather from posing negative implications on the safety of employees and other persons visiting.

The early warning system shall as a minimum provide for the following:

#### **Construction work done during electrical storms**

- a. The principal contractor shall ensure that all employees are removed from heights and all employees are as safe as possible, in inclement weather conditions.
- b. No work is allowed on the construction site during electric storms where employees cannot be protected from it. Protection involves employees being restricted to:
  - c. eating area fitted with a lightning mast workshops
  - d. inside buildings
- e. No work is allowed in electrical storms on top of open structural steel, even when earthed.
- f. No work is allowed on heights when the lightning is within a 10-kilometer radius.
- g. After inclement weather on-site risk assessments will be reviewed to include wet conditions.

### **Lifting equipment operations during inclement weather**

- a) Lifting operations will stop during lightning within a 10 kilometre radius and wind above 28 km/h, and the lifting equipment operator will not be allowed to leave the lifting equipment with the booms extended.
- b) Lifting operations will stop during rain, rigging and hand lifts.
- c) Booms on all lifting equipment will be retracted.
- d) All rigging operations will stop and employees will be removed from site.

### **Construction work done during rain**

- ❖ During rainy conditions all work on steel structures will stop.
- ❖ No electrical tools will be used during rainy weather in open areas.

- ❖ Work can be done in water proof areas where there is a zero risk for electrocution.
- ❖ Areas that may be cleared for work during rain includes: workshops offices work on ground level with the provision that the area is maintained in a safe dry condition

### **Scaffolding activities during inclement weather conditions**

During inclement weather only limited scaffolding actions will be permitted i.e. erecting and dismantling activities.

Guidelines for safe choices:

| <b>Weather type</b> | <b>Building and dismantling of scaffolding</b> |
|---------------------|------------------------------------------------|
| Lightning           | Stop all activities                            |
| Light rain          | Stop all activities                            |
| Heavy rain          | Stop all activities                            |
| Wind <28 km/h       | Full use                                       |
| Wind >40 km/h       | Stop all activities                            |
| Light mist          | Full use                                       |
| Heavy mist          | Full use                                       |
| Hail                | Stop all activities                            |

All scaffold users will:

- a) Ensure that scaffolding is inspected immediately after inclement weather conditions.
- b) Ensure that the risks associated with working at heights during inclement weather are identified and reasonably mitigated.
- c) Be cautious of slip/trip hazards when performing activities during inclement weather.
- d) Take note of the weather when completing the daily safe task instructions on site, where applicable.

### **Driving in inclement weather**

The principal contractor shall ensure that the danger of driving in wet conditions is adequately covered in a risk assessment.

The risk assessment will include, but not limited to:

1. route planning
2. speed reduction
3. planning for emergencies
4. driving precautions for slippery surfaces
5. visibility hazards

## **ANNEXURE A**

### **CLOSE OUT REQUIREMENTS**

**The H&S files for all Contractors require closure and handover to the Principal Contractor at the completion of the project. The following list is an example of what should be included but is not exhaustive. The Client may require further information at the time of completion and the Principal Contractor will ensure that all instructions are met. Documentation would include all records from the start of the project. Daily or monthly plant inspection records are not required unless they are related to an accident. All records to be in electronic**

**format and submitted to the**

**OHS agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.**

**Failure to comply could result in the certificate of completion not being issued.**

**Health and Safety close out file requirements include:**

- a) Client H&S Specification;
- b) Principal Contractor's OHS Plan(s);
- c) Organograms;
- d) Legal Appointments;
- e) List of all employees employed on a permanent or contractual basis over the duration of the contract;
- f) Notification to Department of Labour of commencement of work;
- g) Letters of Good Standing for the Project;
- h) Full files for all Contractors as well as their close out reports;
  - List of Contractors;
  - All employees employed on a permanent or contractual basis over the duration of the contract;

- Letters of Approval of Contractors
  - Medical Certificates of Fitness;
  - PC and own audits;
  - Mandatory Agreements;
  - Letters of Good Standing, and
  - Appointments;
- i) Incident Records;
  - j) Non-Conformance records;
  - k) Agent's Audits;
  - l) Method Statements;
  - m) Risk assessments;
  - n) Safe work procedures;
  - o) Medical surveillance certificates of fitness. Medical records are to be kept according to the OH&S Act as amended;
  - p) All drawings for temporary structures (suspended beams/scaffolds etc.);
  - q) All operating manuals for any systems that require ongoing maintenance, and
  - r) Copies of test results, policies and procedures for environmental monitoring (silica, noise, dusts etc.).

### **Defect and Liability Period**

The H&S files are to be kept 'live' for the defect and liability period by the Principal Contractor, including those of their Contractors. Any work required during the defect and liability period will require an assessment of the H&S file by the Pr. CHSA prior to any work commencing.

## HIRA: 14 Day look-ahead by Principal Contractor

### H&S - ANNEXURE B

The **Principal Contractor** must report the health and safety status of the upcoming activities to the H&S Agent at audits in writing using the following advised format.

### 14 Day Look-ahead programme – Hazard Identification Risk Assessment (HIRA)

Project: .....

Contractor: .....

Look-ahead period: from ..... to .....

| No. | Activity description and location on site | When is activity due to start (date)? | Risk assessment (HIRA) & method statement to be done by (date)? | HIRA done and in file (date) | Workers trained / informed of the SWP's (date done) | Comments by contractor if required |
|-----|-------------------------------------------|---------------------------------------|-----------------------------------------------------------------|------------------------------|-----------------------------------------------------|------------------------------------|
| 1.  |                                           |                                       |                                                                 |                              |                                                     |                                    |

|    |  |  |  |  |  |  |
|----|--|--|--|--|--|--|
| 2. |  |  |  |  |  |  |
| 3. |  |  |  |  |  |  |
| 4. |  |  |  |  |  |  |
| 5. |  |  |  |  |  |  |
| 6. |  |  |  |  |  |  |
| 7. |  |  |  |  |  |  |

Notes:

Why is it so important to identify hazards, assess the potential risks associated with the hazards and implement effective safe work procedures (SWP's) to eliminate the risks?

1. It is a legal requirement that every Employer (Company) creates a safe and healthy working environment for its workers – Section 8 of the OHS Act (Occupational Health & Safety Act 85/1993).
2. It is the duty of Employers (Companies and their managers/supervisors) to identify the hazards/hazardous activities which could potentially cause harm to their workers and to other persons e.g. site visitors, members of the public outside the site and other contractors (Construction Regulations 2003).

Definitions that you need to understand:

Danger: means anything which may cause injury or damage to persons or property e.g. a machine; electrical installation; portable electrical tool; etc.

Hazard: means a source of or exposure to danger e.g. operating a machine; working with/on electricity on site; operating or being close to an angle grinder.

Risk: means the probability that injury or damage will occur. In other words what injuries/damage could result from exposure to the particular danger (hazard) and what the chances/probability are (usually indicated by a rating level e.g. high, medium, low)

Finally, in the case of an injury or property damage, if you cannot prove that an assessment of risk was undertaken, you could be found guilty of contravening the OHS Act and/or Construction Regulations which is a criminal offense. As a supervisor/manager you have the implied duty and responsibility to identify hazards, determine what could potentially go wrong, and then put the necessary safety/health measures/procedures in place. This means you have to carry out a formal hazard identification and risk assessment (in writing). Then you need to inform your workers of the hazards, risks and safe work procedures. Finally, you have the legal duty of enforcing these safe work procedures – you need to check that the procedures are in fact being implemented by the workers.

## H&S - ANNEXURE C

### CONSTRUCTION HEALTH & SAFETY COSTS TO BE INCLUDED IN THE PRINCIPAL CONTRACTOR'S PRICE

In terms of the Construction Regulations (2014), it is the Client's duty to ensure that the cost for health & safety has been provided for by the Principal Contractor, before appointment.

we as ETHEKWIN MUNICIPALITY require the following health & safety costs to be provided for by the Contractors.

It must be made very clear that these are just some of the health & safety costs to be included in your tender price. It is the duty of the Principal Contractor and its Contractors to ensure that all aspects of the Occupational Health & safety Act 85/1993 and Construction Regulations are catered for.

.Estimated Health and Safety Cost

| Number | Item                                 | What is required            | Pre Requisite                            | Legal Reference                                                                                                                                                                             |
|--------|--------------------------------------|-----------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1s     | Safety Administration<br>on the Site | Full time Safety<br>Officer | Competent and Registered with<br>SACPCMP | In terms of section 18(1)(c) of the Act, (no.43 of<br>2000), as published on 31 May 2013 in the<br>Government Gazette, No.36525, Board Notice<br>114 of 20'3 for commencement 1 August 2013 |
|        |                                      |                             | Diploma in Safety Management             |                                                                                                                                                                                             |
|        |                                      |                             | Safety Manager                           |                                                                                                                                                                                             |



|   |  |             |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                     |
|---|--|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 |  | Safety File | Comprehensive Safety File in a soft Copy and hard copy must be submitted addressing all the requirement in the Baseline Risk Assessment and the Client Health and Safety Specification | Construction Regulation 7 (b)<br><br>Documentation required in terms of the Act and applicable regulations                                                                                                                                                          |
| 3 |  | Medicals    | All employees on the site including local labour                                                                                                                                       | Regulation 7 (g) and (8)<br><br>A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to being performed and issued by an occupational health practitioner in the form of Annexure 3 |

| Number | Item     | What is required                     | Pre Requisite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Legal Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------|----------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4      |          | Personal Protective Equipment        | <ul style="list-style-type: none"> <li>• Fall Arrest Equipment</li> <li>• Overalls</li> <li>• Boots</li> <li>• Eye Protection</li> <li>• Hearing protection</li> <li>• Hand protection</li> <li>• Dust masks</li> <li>• Site Safety Signage (specific and applicable)</li> </ul>                                                                                                                                                                                                                                                                                   | <p>Construction Regulations 7 (c)(i)<br/>General Safety Regulations 2 (3) (a) – (g)</p> <p>Note: PPE is not limited and will increase as the Risk increase. Extra must be allowed for any new risks not identified in the initial stage of the project</p>                                                                                                                                                                                                                                                                                                                  |
| 5      | Training | Specialized training for the Project | <ul style="list-style-type: none"> <li>• First Aiders</li> <li>• Flag Persons</li> <li>• Health and Safety Representatives</li> <li>• Traffic Safety Officer</li> <li>• Emergency Team/ Warden/ Fire</li> <li>• Working at Height/ Use of fall protection equipment</li> <li>• Rescue from Falling from Height <ul style="list-style-type: none"> <li>• Scaffold Team / Supervisor/Inspector/Erector team/team leader</li> </ul> </li> <li>• Induction for visitors / employees</li> <li>• Mandatory training / Risk register / Risk Assessments / P.PE</li> </ul> | <p>Training programs for contractor's employees</p> <p>Competent Person means a person who-</p> <p>(a) Has in respect of the work or task to be performed the necessary 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 Qualifications Framework Act, 2000(Act No.67 of 2000) those qualification and that training must be regarded as the required qualifications and training.</p> |

| Number | Item               | What is required         | Pre Requisite                                                                                                                                                                                                                                                                                                                                                     | Legal Reference                                                                                                                                                                                        |
|--------|--------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6      | Site Establishment | Welfare facility on site | <ul style="list-style-type: none"> <li>Sheltered Eating Facility</li> <li>Changing Facility for both sexes</li> <li>Ablution facility male/female : Ratio 1:15</li> <li>Toilets for male/female: Ratio 1:30</li> <li>Drinking water</li> <li>Fully fenced</li> </ul>                                                                                              | Construction Regulation 30 – provide at or within reasonable access to every construction site.                                                                                                        |
| 7      | Traffic            | Traffic Safety Officer   | <p>Competent in Traffic Safety</p> <p>Minimum SAMTRAC</p> <p>Comply with SANS 19212:2004 Construction and Management Requirements for Works Contracts, Part 2 Accommodation of Traffic on Public Roads occupied by the Contractor</p> <p>Develop Traffic Management Plan according to South African Road Traffic Signs Manual – Volume 2 : Roadwork's Signing</p> | <p>South African Road Federation</p> <p>Register online <a href="http://www.sarf.org.za">http://www.sarf.org.za</a> <a href="mailto:tshidi@sarf.org.za">tshidi@sarf.org.za</a></p> <p>011 394 7934</p> |

| Number | Item                         | What is required                             | Pre Requisite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Legal Reference                                                      |
|--------|------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 8      |                              | Accommodation of traffic for on and off ramp | <ul style="list-style-type: none"> <li>• Safety signs and directions</li> <li>• Traffic cones</li> <li>• Delineators / danger plates</li> <li>• Traffic warning lights/ night (amber)</li> <li>• New jersey barriers plastic (moveable)</li> <li>• Concrete barriers and temporary guardrails</li> <li>• Stop / Go signals / two way radio's</li> <li>• Flag persons</li> <li>• Barricades</li> <li>• Speed controls</li> <li>• Traffic Management Plan</li> <li>• By-pass or detour</li> <li>• Public Safety</li> <li>• Warning devices</li> <li>• Lay out of detour</li> </ul> | Traffic accommodation design in Compliance with Legislation          |
| 9      | Public Safety                | Pedestrian movement                          | <ul style="list-style-type: none"> <li>• Temporary boarding of walkways</li> <li>• Safety signage and information boards</li> <li>• Concrete barrier with fixed guardrail</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                             | Public Safety<br>Catch platform CR 4(h)                              |
|        |                              |                                              | along the entire length                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                      |
| 10     | Outsourced Service Providers | Temporary Design                             | <ul style="list-style-type: none"> <li>• Formwork / scaffolding</li> <li>• Geo Tech Report</li> <li>• Stabilizing of steep slope and bank</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                             | Appointment and services of temporary designer<br>CR13 2 (b)<br>(ii) |

| Number | Item             | What is required       | Pre Requisite                                                                                                                                                                 | Legal Reference                                                                                                |
|--------|------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 11     |                  | Security               | <ul style="list-style-type: none"> <li>▣ Fencing of the site</li> <li>▣ Night and Day staff/ control</li> <li>▣ Entrance / gate control</li> </ul>                            | Contract with Security Company                                                                                 |
| 12     | Public Interface | Public space           | <ul style="list-style-type: none"> <li>▣ Demarcation</li> <li>▣ Working in the road</li> <li>▣ Confined space in manholes</li> <li>▣ Surface drainage/inlet /kerbs</li> </ul> | Traffic Management Plan approved by eThekweni Transport Authority and Metro Police                             |
| 13     | Utilities        | Relocation of services | <ul style="list-style-type: none"> <li>▣ Fiber Optic Cables</li> <li>▣ Electricity supply</li> <li>▣ Water supply</li> </ul>                                                  | Locality plans of all underground services to be obtained from Authorities prior to commencement<br>CR 14 4(e) |
| 14     | Construction     |                        | <ul style="list-style-type: none"> <li>▣ Realignment of roadworks</li> <li>▣ Relocate services</li> </ul>                                                                     |                                                                                                                |
| 15     |                  | Superstructure         | Retaining of the bank<br>Kenville Bridge works                                                                                                                                | Specialized Contractor to be appointed (Research for suitable service provider)                                |

**H&S - ANNEXURE  
D**

**GENERAL COMPLIANCE REQUIREMENTS**

The **Principal Contractors** and Contractors must comply with but not be limited to the requirements tabled below: Prove compliance with annexure 'D' at audits conducted by the safety agent.

| Item | What                                    | When                                                        | Output                                                                                                                                                                                                    | Reviewed by<br>Date: |
|------|-----------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| C1   | Construction-phase Health & Safety Plan | Monthly review                                              | Principal Contractor to indicate the status of Contractors' health & safety plans.                                                                                                                        |                      |
| C2   | Health & Safety File(s)                 | Open file when construction begins and maintain throughout. | Have file on hand at audits. Contractors to report on their file at monthly health & safety audits by the Principal Contractor.                                                                           |                      |
| C3   | OHS Act and relevant Regulations        | Monthly review                                              | To be kept in the health & safety file on site.                                                                                                                                                           |                      |
| C4   | Health & Safety Induction training      | Every worker before he/she starts work.                     | Attendance registers to be kept.                                                                                                                                                                          |                      |
| C5   | Awareness Training (Toolbox Talks)      | At least every two weeks                                    | Attendance registers to be kept.                                                                                                                                                                          |                      |
| C6   | Health & Safety Meetings                | Monthly                                                     | Meeting minutes to be kept.                                                                                                                                                                               |                      |
| C7   | Health & Safety Reports                 | Weekly (safety officer)                                     | Reports covering: <ul style="list-style-type: none"> <li>Incidents / injuries and investigations</li> <li>Non-conformances by employees &amp; Contractors</li> <li>H&amp;S inspection findings</li> </ul> |                      |

|    |                       |         |                                                                                                                                                                                                                                                                                                                                 |  |
|----|-----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| C8 | Audits on contractors | Monthly | Report covering <ul style="list-style-type: none"> <li>• H&amp;S File/Plan</li> <li>• WCA status</li> <li>• Appointment letters</li> <li>• Section 37(2) agreements</li> <li>• Risk assessment &amp; safe work procedures</li> <li>• Physical site inspection</li> <li>• Any other contractor specific requirements.</li> </ul> |  |
|----|-----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

|     |                                         |                                                                   |                                                                                             |  |
|-----|-----------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--|
| C9  | Emergency procedures                    | Monthly evaluation of procedure                                   | Compile written procedure as well as tel. numbers.                                          |  |
| C10 | Risk assessments & fall protection plan | Updated and signed off at least monthly.                          | Documented risk assessments to be available. 14 day look-ahead programme to be implemented. |  |
| C11 | Method statements                       | Drawn up and distributed before workers are exposed to the risks. | Documented set of method statements reviewed and signed off.                                |  |



|     |                     |           |                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|-----|---------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| C12 | General Inspections | Daily     | Report OHS Act compliance: <ul style="list-style-type: none"> <li>• Excavations and trenches (incl. barrier netting and signage).</li> <li>• Portable electrical tools.</li> <li>• Construction vehicles, mobile plant, lifting machines.</li> <li>• Traffic and pedestrian accommodation.</li> <li>• Signage, notices and hoarding.</li> <li>• Explosive powered tools.</li> <li>• Scrap removing/housekeeping</li> </ul> |  |
| C13 | General Inspections | Weekly    | <ul style="list-style-type: none"> <li>• Temporary Electrical Installations.</li> <li>• Hoarding and fencing.</li> </ul>                                                                                                                                                                                                                                                                                                   |  |
| C14 | General Inspections | Monthly   | <ul style="list-style-type: none"> <li>• Fire-fighting equipment.</li> <li>• Ladders.</li> <li>• First aid equipment.</li> </ul>                                                                                                                                                                                                                                                                                           |  |
| C15 | General Inspections | 3-monthly | <ul style="list-style-type: none"> <li>• Lifting tackle.</li> <li>• Oxy acetylene cutting &amp; welding sets.</li> <li>• Fall prevention and arrest equipment.</li> </ul>                                                                                                                                                                                                                                                  |  |
| C16 | General Inspections | 6-monthly | <ul style="list-style-type: none"> <li>• Lifting machines.</li> </ul>                                                                                                                                                                                                                                                                                                                                                      |  |

|     |                                                                          |                                     |                                                                                                                                                      |  |
|-----|--------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| C17 | Load tests / performance tests                                           | Annually / once erected, before use | <ul style="list-style-type: none"> <li>Lifting machines.</li> <li>Cherry pickers.</li> </ul>                                                         |  |
| C18 | List of Contractors                                                      | List to be updated weekly           | Compile a list of Contractors: Name, supervisor, company tel. numbers and trade.                                                                     |  |
| C19 | Workman's Compensation                                                   | Ongoing                             | Compile a list of Contractors' workman's compensation proof of good standing.                                                                        |  |
| C20 | Construction site rules & Section 37(2) Mandatory Agreements             | Ongoing                             | Compile a list of all signed up Mandataries. Proof of agreement documents to be kept in H&S file.                                                    |  |
| C21 | Medical assessments or as otherwise prescribed. Competence of personnel. | Annual assessments                  | <p>Proof to be available in the form of certificates of fitness.</p> <p>Certificates of competence required for various operators and personnel.</p> |  |



## H&S - ANNEXURE E

### Acknowledgement of receipt:

I, \_\_\_\_\_ representing

\_\_\_\_\_ Principal Contractor / Contractor

have received the Health and Safety Specifications in good order and shall ensure that the Principal Contractor / Contractor and its personnel comply with all obligations / requirements / specifications in respect thereof. This document is legally binding in terms of Regulation 5 of the Construction Regulations (2014).

I hereby confirm that copies of the following documentation will be kept on site for viewing and inspection purposes for the duration of the construction work:

- 📄 Client's Construction Safety, Health and Environmental Specification,
- 📄 Approved Construction Safety, Health and Environmental Plan,
- 📄 Occupational Health and Safety Act, Act 85 of 1993,
- 📄 Construction Regulations of February 2014, and

Signature of Principal Contractor / Contractor

Date

Signature of Client / Client's Agent

Date