






Site Specific Health and Safety Specification for TASEZ
Phase 2 Development: Construction of New Bulk Water
Reticulation Infrastructure for the TASEZ Phase 2
Programme

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Official Approval

It is hereby certified that:

- The Specification was developed by the Infrastructure Division under the guidance of the Executive Team.
- The Specification will be reviewed as required and updated as necessary, to ensure continuous improvement.
- The implementation of this Specification will be subjected to both internal and external audit as part of the monitoring process.

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Document History

Table 1: Document History

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1. Introduction and Background

The Construction Regulations, 2014 obliges a client to:

- 1.1. Prepare a baseline risk assessment for an intended construction work project.
- 1.2. Prepare a suitable, sufficiently documented and coherent site-specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph
- 1.3. Provide the designer with the health and safety specification contemplated in paragraph
- 1.4. Ensure that the designer takes the prepared health and safety specification into consideration during the design stage.
- 1.5. Ensure that the designer carries out all responsibilities contemplated in section 6 of the regulations.
- 1.6. Include the health and safety specification in the tender documents.
- 1.7. Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures.
- 1.8. Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely.
- 1.9. Take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these regulations.
- 1.10. Ensure before any work commences on a site that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993.
- 1.11. Appoint every principal contractor in writing for the project or part thereof on the construction site.
- 1.12. Discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in regulation 7 (1) and must thereafter finally approve that plan for implementation.
- 1.13. Ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor.
- 1.14. Take reasonable steps to ensure that each contractor's health and safety plan contemplated in section 7 (1) (a) of the regulations is implemented and maintained.

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- 1.15. 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.
 - 1.16. Ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit.
 - 1.17. Stop any 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 specifications and the principal contractor's health and safety plan for the site.
 - 1.18. Where changes are brought about to the design or construction work, make sufficient Health and safety information and appropriate resources available to the principal contractor to execute the work safely.
 - 1.19. Ensure that the health and safety file contemplated in section 7 (1) (b) of the Regulation is kept and maintained by the principal contractor.
 - 1.20. Where a client requires additional work to be performed as a result of a design change or an error in construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
 - 1.21. Where a fatality or permanent disabling injury occurs on a construction site, the client must ensure that the contractor provides the provincial director with a report contemplated in section 24 of the act, in accordance with regulations 8 and 9 of the general administrative regulations, 2013, and that the report includes the measures that the contractor intends to implement to ensure a safe construction site as far as is reasonably practicable.
 - 1.22. Where more than one principal contractor is appointed as contemplated in section (1)(k) of the Regulations the client must take reasonable steps to ensure co-operation between all principal contractors and contractors in order to ensure compliance with the Regulations.
 - 1.23. Where a construction work permit is required as contemplated in section 3 (1) of the Regulations; the client must, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an agent to act as his or her representative, and where such an appointment is made the duties that are imposed by the Regulations upon a client, apply as far as reasonably practicable to the agent so appointed.
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- 1.24. Where notification of construction work is required as contemplated in section 4 (1) of the Regulations, the client may, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an agent to act as his or her representative, and where such an appointment is made the duties that are imposed by these Regulations upon a client, apply as far as reasonably practicable to the agent so appointed.
- 1.25. Provided that, where the question arises as to whether an agent is necessary, the decision of an inspector is decisive.
- 1.26. An agent contemplated in section (5) and (6) must:
 - 1.26.1. Manage The Health And Safety On A Construction Project For The Client; and
 - 1.26.2. Be registered with a Statutory Body approved by The Chief Inspector as qualified to perform the required functions;
- 1.27. When the chief inspector has approved a statutory body as contemplated in section (7)(b) of the Regulations he or she must give notice of that approval in the Gazette

2. Purpose

The purpose of this specification is to:

- 2.1. Ensure that TASEZ fulfils its duties as client for the construction of Phase 2: Construction of New Bulk Water Reticulation Infrastructure for the TASEZ Phase 2 Programme as prescribed in section 5 of the Construction Regulations and as provided in paragraph 1 of this specification.
- 2.2. Provide the Principal Contractor and all other contractors with the specification to be used for developing, implementing and maintaining a site-specific Health and Safety Plan for the intended construction work.
- 2.3. Ensure that compliance with the Act and all applicable regulations.
- 2.4. Ensure that the Principal Contractor compliance with the Act and is informed of his/her scope of authority as set out in section 37(1) of the Act.

3. Introduction to this the Health and Safety Specification

- 3.1. This specification forms an integral part of the contract, and the Principal Contractor is required to use it when compiling its project-specific Health and Safety plan. TASEZ shall forward a copy of this project construction site health & safety specification to all Principal Contractors at their bidding stage so that they can in turn prepare Health and Safety plans relating to operations and include the cost of safety thereof.
- 3.2. This specification does not replace the Construction Regulations 2014, but is a supplementary specification as required in terms of the Regulations. Partial references to or quotes from the Regulations do not imply that the sections not referred to or quoted from are of lesser importance or are not applicable. The Principal Contractors, at all times required to and will remain responsible to fully address all requirements and standards of the Act (85 of 1993), the Regulations (2014).
- 3.3. This project specific health and safety specifications covers the general requirements for addressing, mitigating and controlling Occupational Health and Safety related risks, problems, incidents and injuries on projects constructed or executed for TASEZ.
- 3.4. The scope addresses legal compliance, hazard identification, risk assessment, risk control methodology and the promotion of a health and safety culture amongst those working on this project. The project specific health and safety specifications contains clauses that are generally
- 3.5. applicable to building, engineering and construction and imposes controls associated with activities that impact on human health and safety.
- 3.6. The Principal Contractor is required to comply with the provisions of the OHS Act, all applicable Regulations and this project specific health and safety specifications.

4. Scope of the Document

4.1. Applicability

This document is applicable to TASEZ Phase 2 Development: **Construction of New Bulk Water Reticulation Infrastructure for the TASEZ Phase 2 Programme.**

5. References

5.1. Normative

- 5.1.1. Occupational Health and Safety Act, 1993 and regulations promulgated under the Act.
- 5.1.2. Compensation for Occupational Injuries and Diseases Act, 1993.
- 5.1.3. Construction Regulations, 2014
- 5.1.4. National Qualification Framework Act, 2000
- 5.1.5. National Qualification Framework Act, 2008
- 5.1.6. National Building Regulations and Building Standards Act, 1977
- 5.1.7. Engineering Professions Act, 2000
- 5.1.8. General Administrative Regulations, 2003

- 5.2. Informative
 - 5.2.1. TAS-HSH-POL-001: TASEZ SHE Policy Statement
 - 5.2.2. TAS-GQM-PLN-004: TASEZ Contractor Management Plan
 - 5.2.3. Constitution of the Republic of South Africa (Act 108 of 1996)

6. Definitions

Below are TASEZ definitions of terms, the Act, 1993 and the Regulations will be used as the basis for the definitions of some terms and other terms will be defined in other organisational documents as applicable.

Table 2: Definitions

Term	Definitions
Angle of Repose	Means the steepest angle of surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away.
Bulk Mixing Plant	Means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work.
Chief Executive Officer	In relation to a body corporate or an enterprise conducted by the State, means the person who is responsible for the overall management and control of the business of such body corporate or enterprise.
Competence	Ability to apply knowledge and skills to achieve intended results.
Competent Person	Means a person who: <ul style="list-style-type: none"> a) 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

Term	Definitions
	Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and b) Is familiar with the Act and with the applicable regulations made under the Act.
Construction Manager	Means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site.
Construction Site	Means a workplace where construction work is being performed.
Construction Supervisor	Means a competent person responsible for supervising construction activities on a construction site.
Construction Vehicle	Means a vehicle used as a means of conveyance for transporting person or material, or persons and material, on and off the construction site for the purposes of performing construction work.
Construction Work	Means any work in connection with – a) the erection, maintenance, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure. b) the installation, erection, dismantling or maintenance of a fixed plant where such work includes the risk of a person falling. c) the construction, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system or any similar civil engineering structure; or d) the moving of earth, clearing of land, the making of an excavation, piling, or any similar type of work.
Construction Work Permit	A document issued by the provisional director to a client who intends to have construction work carried out. Note: The client must apply for the Construction Work Permit in writing to the provincial director at least 30 days before that work is to be carried out if the intended construction work will: a) Exceed 365 days and will involve more than 3600 person days of construction work: or b) The tender value limit is grade 7, 8 or 9 of the Construction Industry Development Board grading.
Consultation	Seeking views before making a decision.
Contractor	External organisation providing services to the organisation in accordance with agreed specifications, terms and conditions.
Competent Person	means a person who - a) 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

Term	Definitions
	<p>training are registered in terms of the provisions of the National Qualification Framework Act, 2008 (Act No.67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and</p> <p>b) is familiar with the Act and with the applicable regulations made under the Act.</p> <p>Notes:</p> <p>a) An all-inclusive assessment should be on all four components knowledge, training and experience, and where appropriate qualifications exist in relation to the work to be performed.</p> <p>b) Part (b) of the above definition is best reflected through demonstration of understanding of the OSH Act and its various applicable regulations.</p>
Danger	Means anything which may cause injury or damage to persons or damage property.
Demolition Work	Means a method to dismantle, wreck, break, pull down or knock down a structure or part thereof by way of manual labour, machinery, or the use of explosives.
Design	In relation to any structure, includes drawings, calculations, design details and specifications.
Designer	<p>a) A competent person who:</p> <ul style="list-style-type: none"> (i) Prepares a design, (ii) Checks and approves a design; or (iii) Arranges for any 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); <p>or</p> <p>(iv) Designs temporary work, including its components,</p> <p>b) An architect or engineer contributing to or having overall responsibility for a design.</p> <p>c) A building services engineer designing details for fixed plant;</p> <p>d) A surveyor specifying articles or drawing up specifications.</p> <p>e) A Contractor carrying out design work as part of a design and building project; or</p> <p>f) An interior designer, shopfitter or landscape architect.</p>
Employee	Means, subject to the provisions of subsection (2) of the Act, any person 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.
Excavation Work	Means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping.
Explosive Actuated Fastening Device	Means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing.

Term	Definitions
Environmental Incident	Means an unexpected sudden occurrence including a major emission, Fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment whether immediate or delayed or as defined in section 24 (1) of the Act.
Fall Arrest Equipment	Means equipment used to arrest a person in a fall, including personal equipment such as body harness, lanyards, deceleration devices, lifeline or similar equipment.
Fall Prevention Equipment	Means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guardrails, screens, barricades, anchorages or similar equipment.
Fall Protection Plan	Means a documented plan, which includes and provides for: a) All risks relating to working from a fall risk position, considering the nature of work undertaken. b) The procedures and methods to be applied in order to eliminate the risk of falling; and c) A rescue plan and procedures
Fall Risk	means any potential exposure to falling either from, off or into:
Hazard	A source of or exposure to danger/ source with a potential to cause injury and ill health.
Health and Safety Agent	A competent person appointed in terms of section 5(5) of the Construction Regulations, 2014 and means EQProject Managers and Safety Solutions
Health and Safety Committee	Means a committee established under section 19 of the Act.
Healthy	Means free from illness or injury attributable to occupational causes.
Health and Safety File	Means a file, or other record containing the information in writing required by this plan.
Health and Safety Plan	Means a site, activity or project specific documented plan in accordance with the client's health and safety specification.
Health and Safety Equipment	Means any article or part thereof which is manufactured, provided or installed in the interest of the health and safety of any person.
Health and Safety Representative	Means a person designated in terms of section 17(1) of the Act.
Health and Safety Plan	Means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;
Material Hoist	Means a hoist used to lower or raise material and equipment, excluding passengers.
Medical Certificate of Fitness	means a certificate contemplated in regulation 7(1)(8) of the Act

Term	Definitions
Mobile Plant	Means any machinery, appliance or other similar device that is able to move independently and is used for the purpose of performing construction work on a construction site.
National Building Regulations	Means the National Building Regulation made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008.
Person Day	Means one normal working shift of carrying out construction work by a person on a construction site.
Professional Engineer or Professional Certificated Engineer	means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Professions Act, 2000 (Act No. 46 of 2000).
Professional Technologist	Means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;
Provincial Director	Means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003.
Scaffold	Means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both.
Shoring	Means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation.
Structure	<p>a) Any structure, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewerage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;</p> <p>b) Any false work, scaffold or other structure designed or used to provide support or means of access during construction work; or c) Any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling.</p>
Suspended Platform	Means a working platform suspended from supports by means of one or more separate ropes from each support.
Temporary Works	Means any false work, formwork, support work, scaffolding, shoring or other temporary structure designed to provide support or means of access during construction work.
Notification Of Construction Work	A notification which must be made by a contractor who intends to carry out any construction work at least 7 days before that work is to be carried out to notify

Term	Definitions
	the provincial director in writing in a form similar to Annexure 2 as provided in the Construction Regulations, 2014 if the intended construction work will - a) include excavation work; b) include working at a height where there is risk of falling; c) include the demolition of a structure; or d) include the use of explosives to perform construction work.
Plant	Includes structures, buildings, fixtures, fittings, implements, equipment, tools and appliances, and also anything which is used for any purpose in connection with such plant.
Risk	Means the probability that injury or damage will occur.
Process	Set of interrelated or interacting activities which transforms inputs into outputs.
Safe	Means free from any hazard.
Structure	Means: a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure; b) any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or c) any fixed plant in respect of construction work which includes installation, commissioning, decommissioning, or dismantling and where any construction work involves a risk of a person falling.
The Act	Means the Occupational Health and Safety Act, 1993
The Regulations	Means the Construction Regulations, 2014
Tunnelling	Means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

7. Abbreviations

Table 3: Abbreviations

Abbreviations	Description
CWP	Construction Work Permit
CR	Construction Regulations, 2014
ECSA	Engineering Council of South Africa
OHS Act	Occupational Health and Safety Act, 1993
TASEZ	Tshwane Automotive Hub Special Economic Zone (Pty) Ltd

8. Scope of Health and Safety Specification

8.1. Scope of Work

The key deliverables for the TASEZ Phase 2 Development: Construction of New Bulk Water Reticulation Infrastructure for the TASEZ Phase 2 Programme includes:

8.1.1. Construction of bulk water reticulation infrastructure and associated works including but not limited to:

- 8.1.1.1. Site clearance
- 8.1.1.2. Demolishing of illegal structures and fences along the pipeline route
- 8.1.1.3. Setting out of services such as pipeline routes
- 8.1.1.4. Locating, exposing and protection of existing services
- 8.1.1.5. Working in close proximity of existing services
- 8.1.1.6. Connection onto existing services
- 8.1.1.7. Provision and installation of isolation valves complete with valve chambers
- 8.1.1.8. Construction of other required structures (chambers) as described in scope of works or indicated on drawings
- 8.1.1.9. Bulk earthworks – excavation, trimming and base preparation of pipe trenches
- 8.1.1.10. Provision of suitable bedding material for pipes
- 8.1.1.11. Laying and jointing of pipes and pipe specials
- 8.1.1.12. Pressure testing of new pipelines before backfilling
- 8.1.1.13. Backfilling and compaction of trenches
- 8.1.1.14. Removal of surplus material to an approved disposal site
- 8.1.1.15. Disinfecting pipelines after installation
- 8.1.1.16. Reinstatement of surfaces after backfilling
- 8.1.1.17. Pipeline Road crossings and repair of surfaces
- 8.1.1.18. Provide new Erf connections
- 8.1.1.19. Communicate to local consumers pertaining to water interruptions
- 8.1.1.20. Arrange with City of Thwane for shutdowns during connections
- 8.1.1.21. Managing sub-contractors including SMME contractors
- 8.1.1.22. Traffic control and temporary signage during construction

- 8.1.1.23. Informing affected consumers of planned network shutdowns and duration of shutdowns.
- 8.1.1.24. Temporary works
- 8.1.1.25. Detection of all underground services in the route of the pipeline.
- 8.1.1.26. Determining of suitable route for the pipework to the Phase 2 development.
- 8.1.1.27. Installation of pipeline by connecting to the pre-determined City of Tshwane chamber.
- 8.1.1.28. Construction of various chambers.
- 8.1.1.29. Commissioning of complete works.

8.2. Site Area

- 8.2.1. Site Establishment inclusive of separating construction area with the operations of the activities
- 8.2.2. Loading and Offloading
- 8.2.3. Control of access to public and staff on site
- 8.2.4. Security
- 8.2.5. Access to services and protection thereof

8.3. Excavation Works

- 8.3.1. Digging of trenches
- 8.3.2. Laying of pipes
- 8.3.3. Backfilling of trenches
- 8.3.4. Compaction of the backfilled areas to the specified percentage

8.4. External Services

- 8.4.1. Bulk earthwork
- 8.4.2. Road/civil works
- 8.4.3. Stormwater reticulation and connection
- 8.4.4. Soil drainage reticulation and connection
- 8.4.5. Concrete works

8.5. Plants/Equipment

- 8.5.1. Use of batching plant
- 8.5.2. Use of concrete mixer
- 8.5.3. Use of plant equipment

- 8.5.4. Use of hand and explosive tools
- 8.5.5. Use of lifting equipment
- 8.5.6. Use of suspended platforms
- 8.5.7. Use of construction vehicles (Inclusive of bakkies)

8.6. Environment

- 8.6.1. Management and handling of different waste categories.
- 8.6.2. Use of construction water and portable water.
- 8.6.3. Working during inclement weather.
- 8.6.4. All health hazards that can be present during any of the above activities and should include individual dusts, gases, fumes, vapours, noise, extreme.
- 8.6.5. Temperatures, illumination, windspeed, vibration and ergonomic hazards.
- 8.6.6. Trim site and comply with all environmental rehabilitation requirements

9. Administrative Requirements

9.1. Hazardous and Risks Addressed from Scope of Work

- 9.1.1. From the above scope you are required to identify all activities and the safe controls towards eliminating or mitigating the hazardous or risks which may be encountered during the construction of the TASEZ Phase 2 Development: Bulk Water Engineering Services.
- 9.1.2. The scope also addresses legal compliance, hazard identification and risk assessment, risk control and promoting a Health and Safety culture amongst those working on the project. The specification also makes provision for the protection of those persons other than employees, thus including visitors and other members of the public.

9.2. Limitations of Liability

- 9.2.1. TASEZ and its agent shall not be responsible for any acts or omissions of any Principal Contractor which may directly or indirectly result from the application of the project construction site specific health and safety specifications.

9.2.2. Contractors must ensure that work, equipment, machinery, plant and work practices are, at all times, compliant to the legal requirements as these apply. Any other potential responsibility shall be dealt with in a Mandatory Agreement, as defined in Section 37(2) of the OHS Act. The signed contract must be included in the Health and Safety File.

9.3. Minimum Administrative Requirements

Application for Construction Work Permit (CR3)

TASEZ who intends to have construction work carried out, will at least 30 days before that work is to be carried out apply to the Provincial Director in writing for a construction work permit to perform construction work if the intended construction work will:

- 9.3.1. Exceeds R60 million.
- 9.3.2. Exceed 365 days
- 9.3.3. Will involve more than 3600 person days of construction work; or
- 9.3.4. The works contract is of a value equal to or exceeding sixty million rand or Construction Industry Development Board (CIDB) grading level 6 upper limit.

9.4. Application for Construction Work (CR3)

The Principal Contractor who intends to carry out any construction work other than work contemplated in section 4 of the Regulations; Must submit the following documents for the application of construction work permit:

- 9.4.1. Site Specific Health and Safety Plan.
- 9.4.2. Company Organogram.
- 9.4.3. Letter of Good Standing
- 9.4.4. Project Profile of the Projects Completed by the Principal Contractor in the last 10 years
- 9.4.5. CV of a Registered Construction Health and Safety Officer (SACPCMP) and the proof of competence in the form of certificates and qualifications.
- 9.4.6. CV of Construction Manager and the proof of competence in the form of certificates and qualifications.
- 9.4.7. Principal Contractor's Appointment letter from the Client

9.4.8. Legal appointments for both Construction Manager and Construction Health and Safety Officer.

9.4.9. Completed Annexure 1

On receipt of these documents, the Construction Health and Safety Agent will apply for the Construction Work Permit. The Construction Work Permit will be issued within 30 days.

9.5. Duties of Principal Contractor and Contractors (CR7)

The Principal Contractor shall:

- 9.5.1. Provide and demonstrate to TASEZ or its Agent, a suitable, sufficiently documented and coherent site-specific health and safety plan, based on planned operational construction works and the TASEZ documented health and safety specifications.
- 9.5.2. Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, TASEZ, the TASEZ's agent or a contractor.
- 9.5.3. Ensure that no Contractor is appointed to perform construction work, unless the Contractor is reasonably satisfied that the Contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely.
- 9.5.4. Ensure the Contractor is registered and in good standing with the Compensation Fund.
- 9.5.5. Appoint each Contractor in writing for the part of the project on the construction site.
- 9.5.6. Take reasonable steps to ensure that each Contractor health and safety plan is implemented and maintained on the construction site.
- 9.5.7. Ensure that periodic site 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.

9.6. Management and Supervision of Construction Work (CR8)

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- 9.6.1. The Principal Contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the
 - 9.6.2. construction manager an alternate must be appointed by the Principal Contractor. The appointed Construction Manager cannot manage another site while appointed on this site.
 - 9.6.3. The Principal Contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.
 - 9.6.4. Due to the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a Full-time Construction Health and Safety Officer (CHSO) in writing to assist in the control of all health and safety related aspects on the site CR8 (5).
 - 9.6.5. This person must be fully registered to SACPCMP, Candidate Health and Safety Officer will not be allowed on the project due to its magnitude. The registered Construction Health and Safety Officer must have experience in Civil Engineering works and must have an experience of 3 years post registration to SACPCMP.
 - 9.6.6. The Principal Contractor must be reasonably satisfied that the construction health and safety officer he/she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor.
 - 9.7. Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)
The Principal Contractor shall submit a letter of good standing with its compensation insurer to the TASEZ as proof of registration before construction work commences. Contractors shall submit proof of registration to the Principal Contractor before they commence work on site.
 - 9.8. Occupational Health and Safety Policy
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The Principal Contractor and all Contractors shall submit a Health and Safety policy signed by their Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented by the Company / Contractor.

9.9. Health and Safety Organogram

9.9.1. The Principal Contractor and all Contractors shall submit an organogram, outlining the Health and Safety site Management Structure including the relevant appointments / competent persons.

9.9.2. In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram shall be updated when there are any changes in the site management structure. Client or Client representatives to be notified prompt if there is an intended change on the critical appointments such as Construction Manager and Construction Health and Safety Officer.

9.10. Risk Assessment for Construction Work (CR9)

The Principal Contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site, and must include:

9.10.1. The baseline risk assessment must be included in the health and safety plan.

9.10.2. All risk assessments shall be conducted in terms of an acceptable and documented methodology, prior to commencement of work and in accordance with the provisions of the Regulations.

9.10.3. Issue based risk assessment, risk monitoring and risk review shall be done during the Daily Safe Task Instructions (DSTI) which require:

9.10.3.1. A daily documented listing of hazardous events.

9.10.3.2. A daily documented listing of controls.

9.10.3.3. Proof of communication of the above to all employees.

The Principal Contractor must ensure that that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before any work commences.

9.11. Health and Safety Representative(s) (OHS Act Section 17)

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- 9.11.1. The Principal Contractor shall appoint a full time Safety Representative for the duration of the project.
- 9.11.2. Where more than 20 employees work, the minimum legislative prescribed number of Health and Safety Representatives in a ratio of 1:50 employees be nominated, elected, designated in writing and trained to carry out his/ her functions in his/ her area of responsibility.
- 9.11.3. In addition, it is required that in areas where twenty (20) or less employees are engaged in an activity, at least one Health and Safety Representative be designated in writing in the same manner.
- 9.11.4. The Principal Contractor/ Contractor must consult in good faith, with registered trade unions where applicable, prior to elections and conclude an agreement on procedures outlined in section 6 (1) (a-e) of the General Administrative Regulations).
- 9.11.5. The Principal Contractor/ Contractor must ensure that all Health and Safety Representatives carry out their functions in their area of responsibility, in accordance with Section 18 of the Occupational Health and Safety Act, Act 85 of 1993.
- 9.11.6. Health and Safety Representatives shall be required to conduct monthly inspections within their area of responsibility; the records must be kept for TASEZ auditing purposes.
- 9.11.7. All deviations recorded must immediately be reported to the appointed Construction Supervisor and Safety Officer, where applicable, within the designated person's area.
- 9.11.8. Appropriate action must immediately be taken to eliminate the identified health and safety hazard.
- 9.12. Health and Safety Committees
- The Principal Contractor shall ensure that Health and Safety meetings are held monthly, and meetings must be organized and chaired by the Principal Contractor's Responsible Person.
- 9.12.1. All Contractor's Responsible Persons and Health and Safety Representatives shall attend the monthly Health and Safety meetings.
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- 9.12.2. Contractors shall also have their own internal Health and Safety committees in accordance with the OHS Act 85/1993 and minutes of their meetings shall be forwarded to the Principal Contractor on a monthly basis.
- 9.12.3. The number of persons nominated to serve on the Health and Safety Committee may not exceed the number of Health and Safety Representatives on that Committee. All members required to be in attendance shall be notified of such meeting by means of a formal agenda that must be made available to Construct Capital upon request.
- 9.12.4. The Principal Contractor/ Contractor shall ensure an attendance register and minutes are kept for auditing purposes by the TASEZ. A copy of all minutes must be forwarded to the TASEZ monthly.

9.13. Health and Safety Training

9.13.1. Induction

- 9.13.1.1. The Principal Contractor and subsequent Contractors must provide site specific, risk-based health and safety induction training on commencement of work on site.
- 9.13.1.2. The Principal Contractor in turn may offer induction on the legislative overview as it relates to generic health and safety principles and requirements, which complements the required induction training by the Principal Contractor and by no means replaces it.
- 9.13.1.3. A record of attendance shall be kept in the Health and Safety file. A suitable venue must be supplied to house this training.

9.13.2. Awareness Training

- 9.13.2.1. The Principal Contractor shall ensure that, on site, periodic toolbox talks take place at least once per week and before hazardous work is carried out.
- 9.13.2.2. These talks should deal with risks relevant to the construction work at hand. A record of attendance shall be kept in the Health and Safety file.

9.13.2.3. All Contractors must comply with this minimum requirement and records must be made available to TASEZ on request.

9.13.3. Competency

9.13.3.1. All competent persons shall have the knowledge, experience, training and qualifications specific to the work they have been appointed to supervise, control, and carry out. This must be assessed on a regular basis (e.g. periodic audits by TASEZ, progress meetings, etc.

9.13.3.2. The Principal Contractor is responsible to ensure that competent Contractors are appointed to carry out construction work.

9.13.4. Typical training courses include:

9.13.4.1. SAMTRACT / Health and Safety Management Course

9.13.4.2. First-Aid Level 1 Course

9.13.4.3. Basic- Fire Fighting Course

9.13.4.4. Safety Representative Course

9.13.4.5. Risk Assessment Course

9.13.4.6. Construction Supervisor Safety Course

9.13.4.7. At least one day of Legal Liability - Management Health and Safety training (compulsory for "responsible persons" appointed relevant to corresponding level).

9.14. General Record Keeping

9.14.1. The Principal Contractor and all Contractors must keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the OHS Act 85/1993, and with the Construction Regulations (July 2003).

9.14.2. The Principal Contractor shall ensure that all records of incidents / accidents, emergency procedures training, inspections, audits, etc. are kept in a Health and Safety file kept at the site office.

9.14.3. The Principal Contractor must ensure that every Contractor keeps its own Health and Safety file, maintains the file and make it available on request (The file must include the Contractor's health and safety plan).

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- 9.14.4. These records are crucial for inclusion in the Principal Contractor's consolidated health and safety file for handover to TASEZ on completion of construction work. (A scanned disc is required).
- 9.14.5. The following records must always be maintained:
- 9.14.5.1. Checklists and Registers to be maintained but not limited to:
 - 9.14.5.2. Daily Safe Task Instructions (daily)
 - 9.14.5.3. Daily excavations checklists
 - 9.14.5.4. Daily temporary works / formwork and support work checklist
 - 9.14.5.5. Scaffolding inspected as per the SANS 10085 regulations
 - 9.14.5.6. Construction vehicles and mobile plant (daily)
 - 9.14.5.7. Material Hoists
 - 9.14.5.8. Batch plants (daily)
 - 9.14.5.9. Portable electrical tools (daily)
 - 9.14.5.10. Hand tools (monthly)
 - 9.14.5.11. PPE checklist (monthly)
 - 9.14.5.12. Hazardous Chemical checklist (monthly)
 - 9.14.5.13. First Aid
 - 9.14.5.14. Fire Fighting Equipment
 - 9.14.5.15. Stacking and Storage
 - 9.14.5.16. Hygiene
 - 9.14.5.17. Health and Safety Representatives' inspections
- 9.15. Health and Safety Audits, Monitoring and Reporting
- 9.15.1. TASEZ appointed Health and Safety Agent (EQProject Managers and Safety Solutions) shall conduct monthly Health and Safety compliance audits of the work operations including two site inspections of physical site activities on site.
 - 9.15.2. The Principal Contractor/ Contractor must ensure a copy of all Health and Safety records generated during the course of construction, are handed over to TASEZ upon completion of construction, which should include design drawings of formwork, false work and other permanent and temporal structures.
- 9.16. Emergency Procedures
- 9.16.1. The Principal Contractor shall submit a detailed Emergency Procedure for approval by TASEZ prior to commencement on site.
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- 9.16.2. The procedure shall detail the response plan including the following key elements, which needs to be reviewed on a monthly basis:
 - 9.16.3. List of key competent personnel,
 - 9.16.4. Details of emergency services envisaged to be used to be available on file and on display. Liaison with the relevant service providers responsible for emergency procedures essential to ensure that Principal Contractor/ Contractors plan is aligned with the overall emergency plan of TASEZ.
 - 9.16.5. Actions or steps to be taken in the event of the specific types of emergencies.
 - 9.16.6. Information on hazardous material / situations.
 - 9.16.7. Information on evacuation routes, periodic drills and assembly points to be displayed and otherwise documented and implemented.
 - 9.16.8. Emergency procedure(s) shall include, but shall not be limited to fire, spills, accidents to employees, use of hazardous substances, bomb threats, major incidents / accidents, etc.
 - 9.16.9. The Principal Contractor shall advise TASEZ in writing forthwith, of any emergencies, together with a record of action taken. A list of all services providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and displayed to site personnel.
- 9.17. First Aid Boxes and First Aid Equipment
- 9.17.1. The Principal Contractor and all Contractors must ensure that all working areas are adequately provided with first aid attendants, appointed in writing, whether there are ten (10) employees or less engaged on the contract.
 - 9.17.2. The First Aid attendants must be trained in accordance with the requirements set out in the Act with a recognized and accredited service provider.
 - 9.17.3. Valid first aid certificates are to be kept on the site safety file.
 - 9.17.4. The Principal Contractor/ Contractor must ensure that first aid boxes are adequately filled as per the annexure listing of General Safety Regulation 3 of the Act and checked monthly of which record must be kept.
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9.17.5. This is the minimum requirement and additional needs be considered in terms of prevailing risk/activities and the first-aid equipment to be available at all times and accessible to all. TASEZ / EQPROJECT MANAGERS AND SAFETY SOLUTIONS shall inspect the contents of the first aid box and dressing record from time to time.

9.18. Accident / Incident Reporting, Investigation and Statistics

9.18.1. Injuries are to be categorized into first aid, medical, disabling and fatal.

9.18.2. The Principal Contractor must stipulate in its Health and Safety plan how it will handle each of these categories.

9.18.3. The appointed investigators of the Principal Contractor or Contractors must investigate and report on all incidents to the Principal Contractor at least monthly.

9.18.4. However, the Principal Contractor and all Contractors must ensure that incidents are fully investigated within seven days of the incident in the form on Annexure 1 (General Administrative Regulations) and immediately forward a copy of the completed investigation report to TASEZ / EQPROJECT MANAGERS AND SAFETY SOLUTIONS, with the original report to be kept on the site Health and Safety file, where it may be accessed by an Inspector of the Department of Labour, Health and Safety Representatives or other interested parties.

9.18.5. All serious incidents reportable in terms of the provision of Section 24 of the Act must be reported to the local Department of Labour and to TASEZ in the prescribed manner without delay and before disturbing the scene of the accident. Injured persons may however be removed by qualified emergency personnel.

9.18.6. Photographs and witness statements need to be taken, and sketches made to gather as much information possible during such an emergency and the Principal Contractors must make this available to TASEZ, who must also be notified immediately of such an event and TASEZ reserves the right to participate in all investigations of incidents.

9.18.7. The Principal Contractor and Contractors must keep updated statistics reflecting on their Disabling Incident Frequency Rate *(DIFR) and Disabling Injury Severity Rate (DISR) and number and type of injury.

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- 9.18.8. Record of all injuries other than lost time injuries, such as near misses, first aid and medically treated incidents are also to be kept.
 - 9.18.9. *DIFR (Disabling Injury Frequency Rate) = $DI's \times 1\,000\,000 / \text{Man-hours}$
 - 9.18.10. *DISR (Disabling Injury Severity Rate) = $\text{Days Lost} \times 1\,000\,000 / \text{Man-hours}$
 - 9.18.11. The above man-hours and statistics to be submitted to the TASEZ and TASEZ Construction Safety Agent on a monthly basis.

 - 9.19. Hazards and Potential Situations
 - 9.19.1. The Principal Contractor shall immediately notify the Contractors of any hazardous or potentially hazardous situations that may arise during the performance of construction activities, which include the placement of warning signs.
 - 9.19.2. Principal Contractors shall notify TASEZ of such situations.

 - 9.20. Personal Protective Equipment (PPE) and Clothing
 - 9.20.1. The Principal Contractor must comply with the requirements of the OHS Act's General Safety Regulation 2, to provide PPE and must identify the specific PPE needs per activity and then issue the PPE accordingly.
 - 9.20.2. PPE must be provided to visitors as well by the Principal Contractor and adequate quantities of SANS approved PPE must be available on site at all times.
 - 9.20.3. The Principal Contractor must ensure that adequate training in the use of PPE is provided to all employees, and proof of training shall be kept on the Health and Safety file for auditing purposes.
 - 9.20.4. The Principal Contractor shall clearly outline procedures to be taken when PPE or clothing are:
 - 9.20.4.1. Lost or stolen,
 - 9.20.4.2. Worn out or damaged
 - 9.20.5. Replacements must be made immediately and in line with the requirements of the Act.
 - 9.20.6. The above procedure applies to Principal Contractors and their Contractors, as they are all Employers in their own right.
 - 9.20.7. PPE required: (but not limited to):
 - 9.20.7.1. Hard Hats
 - 9.20.7.2. Overalls
 - 9.20.7.3. Safety shoes
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- 9.20.7.4. Hearing protection
- 9.20.7.5. Eye protection
- 9.20.7.6. Safety harnesses
- 9.20.7.7. Reflective vests
- 9.20.7.8. Dust masks

9.21. Occupational Health and Safety Signage

9.21.1. The Principal Contractor must provide adequate on-site health and safety signage, as per risk identified, including but not limited to the following signs:

- 9.21.1.1. Name of company and project
- 9.21.1.2. Emergency contact telephone numbers
- 9.21.1.3. Names of Supervisor, Health and Safety Representative and First Aider
- 9.21.1.4. No unauthorized entry
- 9.21.1.5. Report to site office
- 9.21.1.6. Required PPE on site
- 9.21.1.7. Site office
- 9.21.1.8. Beware of overhead work
- 9.21.1.9. Hard-hat area
- 9.21.1.10. Deep excavation
- 9.21.1.11. "Construction work" signage
- 9.21.1.12. Road works in progress signage as per SARTSM Volume 2 Chapter 3

9.21.2. Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g. Access routes, stairways, entrances to structures and buildings, scaffolding and other potential risk areas / operations.

9.21.3. The Principal Contractor and Contractors shall also maintain the signage to always ensure its effectiveness and under all conditions.

9.21.4. Signage, which cannot be repaired or are lost/stolen, must be replaced.

9.22. Principal Contractors and Contractors

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- 9.22.1. The Principal Contractor shall ensure that all Contractors appointed by him / her comply with this Specification, the OHS Act 85/1993, Construction Regulations 2014, and all other relevant legislation that may relate to their activities directly or indirectly.
 - 9.22.2. The Contractor, when appointing other Contractors as 'Subcontractors', shall mutatis mutandis ensure compliance as if it was the Principal Contractor.
 - 9.22.3. The Principal Contractor may only appoint a Contractor after approving the Contractor's health & safety plan.
 - 9.22.4. The Principal Contractor must audit each of its Contractors on a monthly basis, with audit reports filed in the health & safety file on site. The audit must include an administrative assessment as well as a physical inspection of the Contractor's health & safety system.
 - 9.22.5. The Principal Contractor must stop any Contractor from carrying out construction work that is not in accordance with the Principal Contractor's or Contractor's health & safety plan or if there is an immediate threat to the health and safety of persons.
 - 9.22.6. The Principal Contractor shall take all reasonable steps necessary to ensure co-operation between all Contractors to enable each of those Contractors to comply with the provisions of these regulations;
 - 9.22.7. The Principal Contractor shall take all reasonable steps to ensure that each Contractor's health and safety plan is implemented and maintained on the construction site: Provided that the steps taken shall include periodic audits at intervals mutually agreed upon between the Principal Contractor and Contractors, but at least once every month;
 - 9.22.8. The Principal Contractor must ensure that where changes are brought about to the design and construction, that sufficient health and safety information and appropriate resources are made available to Contractors so as to allow them to execute the work safely;
 - 9.22.9. The Principal Contractor must ensure that every Contractor is registered and in good standing with a recognized compensation fund or with a licensed compensation insurer prior to work commencing on site;
 - 9.22.10. The Principal Contractor must ensure that potential Contractors submitting tenders have made separate provision for the cost of health and safety measures during the construction process;
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- 9.22.11. The Principal Contractor shall discuss and negotiate with the Contractor the contents of the health and safety plan and shall finally approve that plan for implementation.
- 9.22.12. The Principal Contractor shall hand over a consolidated health and safety file to Construct Capital upon completion of the construction work and shall include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- 9.22.13. The Principal Contractor shall not appoint a Contractor to perform construction work unless the Principal Contractor is reasonably satisfied that the Contractor he or she intends to appoint has the necessary competencies and resources to perform the construction work safely.
- 9.22.14. The Principal Contractor must co-operate with TASEZ at all times and incorporate in the health and safety plan any additional requirements/ precautionary measures that may become necessary in the interest of health and safety of employees, visitors, members of the public or other affected parties.
- 9.22.15. The anticipation of new or potential risks may therefore necessitate the immediate review of the health and safety plan on realization of such need by the Principal Contractor, subsequent Contractor or by TASEZ.
- 9.23. Construction Health and Safety Officer
- 9.23.1. The Principal Contractor is to appoint a full time Construction Safety Officer or Manager (CHSO/M) in writing to assist in the control of all safety related aspects on site. It is compulsory to provide the Name, CV and SACPCMP Certificate as CHSO/M of your appointed, competent construction health and safety officer / manager to TASEZ, prior to work commencing on site.
- 9.23.2. The Safety Officer shall have a minimum of Diploma and / or related Safety Management qualifications and at least 3 years site experience of similar projects post registration. The construction health and safety officer / manager must assist with the control of all safety related aspects on site and be utilised to provide input at early stages of the project, to assist in compiling the health and safety plan.
- 9.23.3. In addition, his/her duties to include:
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- 9.23.3.1. Health and safety audits and inspections including administrative and physical audits of all Contractor's health and safety plans, files and activities.
- 9.23.3.2. Record findings in the form of audit reports that are to be kept in the health and safety file.
- 9.23.3.3. Maintain the Principal Contractor's health and safety plan and file and make documents available on request of the TASEZ.
- 9.23.3.4. Assist with investigations of near misses, incidents and injuries.
- 9.23.3.5. Co-ordinate the function of reviewing the hazard identifications and risk assessments.
- 9.23.3.6. Assisting with method statements (safe work procedures) and checking that the responsible persons follow these procedures.
- 9.23.3.7. Assist with the implementation, monitoring and enforcement of occupational health and safety control measures in order to minimize all risks.

10. Operational Requirements

10.1. Excavation, Shoring, Dewatering or Drainage (CR13)

- 10.1.1. The Principal Contractor shall make provision in the tender for adjacent barricading, shoring within, and dewatering or drainage of any excavation that requires it, unless otherwise stipulated elsewhere in the contracts.
- 10.1.2. If an excavation is more than 1 meter deep, a safe working procedure shall be submitted to TASEZ, and a permit will be issued to the Contractor to proceed with the excavation work.
- 10.1.3. The Contractor shall make sure that:
 - 10.1.3.1. All excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
 - 10.1.3.2. Evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

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- 10.1.4. Must take reasonable and sufficient steps in order to prevent, as far as reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation.
- 10.1.5. May not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where:
- 10.1.6. The sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
- 10.1.7. Such an excavation is in stable material: provided that:
- 10.1.7.1. Permission has been given in writing by the appointed competent person contemplated in sub-regulation (1) upon evaluation by him or her of the site conditions; and
- 10.1.7.2. Where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist.
- 10.1.8. Competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person contemplated in sub-regulation (1) and the professional engineer or technologist, as the case may be.
- 10.1.9. Must take steps to ensure that the shoring or bracing contemplated in paragraph 5.24.5 is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question.
- 10.1.10. Must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing.
- 10.1.11. Must cause convenient and safe means of access to, provided every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working.
- 10.1.12. Must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services.
- 10.1.13. Must ensure that every excavation, including all bracing and shoring, is inspected by the competent person.
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- 10.1.13.1. Daily, prior to the commencement of each shift;
 - 10.1.13.2. After every blasting operation;
 - 10.1.13.3. After an unexpected fall of ground;
 - 10.1.13.4. After damage to supports; and
 - 10.1.13.5. After rain
 - 10.1.14. Must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be:
 - 10.1.15. Adequately protected by a barrier or fence of at least one meter point eight (1.8m) in height and as close to the excavation as is practicable; and
 - 10.1.16. Provided with warning illuminate or any other clearly visible boundary indicators at night or when visibility is poor.
- 10.2. Stacking of Materials
- 10.2.1. The Principal Contractor and other relevant Contractors must ensure that
 - 10.2.2. all stacking will be supervised by a competent person that is appointed in writing to supervise over the activities, and that clearly defined and allocated storage areas are provided for and identified.
 - 10.2.3. All materials being stored within this area must be stacked in accordance with sound stacking principles of sort-by-sort, maintained access, level surfaces, and a height to base ratio of no more than three.
 - 10.2.4. Double handling of material should be avoided and for this purpose, pallets and other stacking options should be used.
 - 10.2.5. Housekeeping must also be maintained at all times as this will be inspected and evaluated by the Principal Contractor during monthly audits.
- 10.3. Speed Restrictions and Traffic Accommodation
- 10.3.1. The Principal Contractor must develop a detailed traffic management plan which must work in correlation with the South African Road Traffic Manual.
 - 10.3.2. The traffic management plan and applicable drawings must be approved by the local traffic department and TASEZ'S Agent.
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- 10.3.3. The Principal Contractor shall ensure that all persons in its employ, all Contractors and all those that are visiting the site are aware and comply with the speed regulations.
- 10.3.4. Detailed traffic management plan required when roads might be temporarily closed, due to the use of cranes etc.
- 10.4. Hazardous Chemical Agents (HCA)
- 10.4.1. The Principal Contractor and other relevant Contractors shall provide the necessary training and information regarding the use, transport and storage of HCA.
- 10.4.2. The Principal Contractor shall ensure that the use, transport and storage of HCA are carried out as prescribed by the HCS Regulations.
- 10.4.3. The Contractor shall ensure that all hazardous chemicals on site have a Material Safety Data Sheet (MSDS) on site and that the users are made aware of the hazards and precautions that need to be taken when using the chemicals.
- 10.4.4. The first aiders must be made aware of the MSDS and how to treat HCA incidents appropriately. TASEZ / EQPROJECT MANAGER AND SAFETY SOLUTION must be afforded access to HCA records and MSDS's at all times.
- 10.4.5. Storage of Fuel / Diesel must comply with the following:
- 10.4.5.1. Bulk storage areas must be demarcated, secured and signage displayed with the relevant warning pictograms.
 - 10.4.5.2. Bulk storage areas must be adequately bunded to ensure containment of 110% of the stored product.
 - 10.4.5.3. Re-fuelling must be conducted in designated re-fuelling areas only.
 - 10.4.5.4. Receptacles must be earthed during decanting.
 - 10.4.5.5. Spill-kits must be available at all times in these designated areas.
 - 10.4.5.6. The surface of the bunded areas and walls must be of impermeable material.
 - 10.4.5.7. The bunded area must be sloped towards a collection pit.
 - 10.4.5.8. Adequate fire-fighting equipment must be provided at such areas.
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10.5. Structures (CR11) and Existing Structures

A Principal Contractor must ensure that:

- 10.5.1. All reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure 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.
- 10.5.2. No structure or part of a structure is loaded in a manner which would render it unsafe.
- 10.5.3. All drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other Contractors, the TASEZ and the TASEZ's agent.
- 10.5.4. Any adjacent structures that may be affected by work must be considered in the planning process. The health and safety of occupants must be duly regarded.
- 10.5.5. Precautionary measures must be detailed and applied to prevent damage and/or loss to property and persons during the entire construction phase.
- 10.5.6. Where a serious risk of damage to existing structures is likely, an assessment by means of a structural inspection and report shall be compiled by a competent person and forwarded to TASEZ / EQPROJECT MANAGERS AND SAFETY SOLUTIONS and Principal Contractor before any persons are exposed to the risk.
- 10.5.7. Inspections of these existing structures must be conducted in compliance with the recommendations of the same competent person.
- 10.5.8. All relevant health & safety information must be brought to the attention of the Principal Contractor and Contractors forthwith.

10.6. Asbestos (where such materials may be present)

- 10.6.1. All work activity involving asbestos must comply with the Asbestos Abatement Regulations 20 in the Occupational Health and Safety Act (85 of 1993).
- 10.6.2. Only a registered asbestos Contractor may work with and dispose of asbestos on site.

10.6.3. Asbestos pipes and building material are quiet probable, due to the age of existing infrastructure.

10.7. Plant and Machinery – Construction Plant

- 10.7.1. Construction Plant includes all types of plant including but not limited to cranes, piling rigs, excavators, road vehicles and all lifting equipment.
- 10.7.2. The Principal Contractor must ensure that all such plant complies with the Requirements of the OHS Act 85/1993, Driven Machinery Regulations and Construction Regulations (2014) in relation to its operation and maintenance thereof.
- 10.7.3. Records of service and maintenance of the vehicles must be of a high standard at all times.
- 10.7.4. All plant shall, subject to design, be fitted with back-up alarms and audible indicating devices.
- 10.7.5. The Principal Contractor and Contractors shall ensure that all construction plant's moving parts are adequately protected.
- 10.7.6. Pre-start inspections shall be conducted on all motorised equipment daily: deviations of such inspections shall be recorded.
- 10.7.7. Construction plant identified for use shall only be operated by a trained and authorised operator.
- 10.7.8. All construction plant shall be operated under the direct supervision of a person competent to identify potential hazards involved in the work he/she is conducting.
- 10.7.9. Work involving the use of construction plant shall be conducted in accordance with an approved Risk Assessment.
- 10.7.10. The Principal Contractor and Contractors shall ensure all operators are equipped with the necessary PPE namely: safety shoes, overall, safety glasses, gloves and additional equipment identified as per risk assessment.
- 10.7.11. All Plant shall be fitted with an extinguisher where practicable.
- 10.7.12. Washing shall be conducted in the designated washing areas.
- 10.7.13. The Principal Contractor and Contractors shall ensure that all equipment moving to and from site is adequately secured.
- 10.7.14. Load test certificates of all lifting equipment must be available on site.

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- 10.7.15. The Principal Contractor and all relevant Contractors shall inspect and keep records of inspections of the construction plant used on site.
 - 10.7.16. Only authorized / competent persons are to use machinery under proper supervision and The Principal Contractor, and all relevant Contractors must provide proof of medical and psychological fitness including training of all operators engaged in the construction activity.
 - 10.7.17. Ensuring the correct fire prevention and fighting equipment is available at all times.
 - 10.7.18. Noise levels where possible shall be kept within reasonable operating norms.
 - 10.7.19. Appropriate PPE and clothing must be provided and maintained in good condition at all times, as legally required.
- 10.8. Pressure Equipment and Gas Bottles
- 10.8.1. The Principal Contractor and all relevant Contractors shall comply with the Pressure Equipment Regulations, including:
 - 10.8.2. Ensuring all vessels owned and hired, comply with the 36-month pressure vessel inspection requirement, and a certificate of testing is available on site for inspection by the TASEZ.
 - 10.8.3. Ensuring that all personnel who shall use this equipment are competent and trained.
 - 10.8.4. Ensuring the users of this equipment are issued with the required PPE.
 - 10.8.5. Ensuring the area is adequately identified as a noise area and warnings are posted.
 - 10.8.6. Ensuring daily pre-start inspections are carried out on all the equipment and the findings recorded.
 - 10.8.7. Ensure proper use and storage of gas during construction, which may include trolleys upon which bottles are moved and chains to prevent bottles falling over.
 - 10.8.8. Ensure that flash back arrestors are affixed where applicable.
 - 10.8.9. The inspection of these equipment must be included in the Principal Contractor's monthly safety inspections / audits.
- 10.9. Fire Extinguishers and Fire Fighting Equipment

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- 10.9.1. The Principal Contractor and relevant Contractors shall provide adequate and serviced fire-fighting equipment located at strategic points on site.
 - 10.9.2. The appropriate notices and signs must be displayed as required.
 - 10.9.3. The Principal Contractor / Contractor shall ensure that all fire equipment to be used on site comply with the following:
 - 10.9.4. Extinguishers shall be placed in positions to ensure that fast and easy access is maintained at all times.
 - 10.9.5. Placement of all extinguishers shall be depicted with the required pictograms.
 - 10.9.6. Extinguishers specific to the classes of fire likely to occur to be installed.
 - 10.9.7. Extinguishers shall be inspected monthly and serviced once annually, and after discharge or visible signs of depressurizations.
 - 10.9.8. The Principal Contractor / Contractor shall ensure all employees are adequately trained in the safe use of the extinguishers and proof of training is kept on site for inspection by Construct Capital.
 - 10.9.9. The Principal Contractor / Contractor shall ensure a person is appointed to inspect the extinguishers on a monthly basis and the results of which are to be entered into a register designed for that purpose.
- 10.10. Construction Vehicles and Mobile Plant (CR23)
- 10.10.1. The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use.
 - 10.10.2. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations 23 (2014) shall apply.
 - 10.10.3. The Principal Contractor/ Contractor shall ensure the following criteria is adhered to when considering the use of Construction Vehicles and mobile plant.
 - 10.10.4. The Contractor must ensure that all construction vehicles and mobile plant:
 - 10.10.4.1. Are of an acceptable design and construction;
 - 10.10.4.2. Are maintained in a good working order;
 - 10.10.4.3. Are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;

10.10.4.4. Are operated by a person who:

10.10.4.4.1. Has received appropriate training, is certified competent and in possession of proof of competency and is authorized in wiring to operate those construction vehicles and mobile plant;

10.10.4.4.2. Has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.

10.10.5. Have safe and suitable means of access and egress.

10.10.6. Are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operations.

10.10.7. Are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guardrails and crash barriers.

10.10.8. Are fitted with structures designed to protect the operator from falling material or from being crushed should be vehicle or mobile plant overturn; (i) Are equipped with an acoustic warning device.

10.10.9. Are equipped with an automatic acoustic reverse alarm; and

10.10.10. Are inspected by the authorized operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

10.11. Lifting Machines and Lifting Tackle

10.11.1. The Principal Contractor and all Contractors must ensure that lifting machinery and tackle is inspected before use and thereafter in accordance with the Driven Machinery Regulations and Construction Regulation 22 (2014).

10.11.2. There must be competent lifting machinery and lifting tackle inspectors who must inspect the equipment daily or before use, taking into account that:

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- 10.11.2.1. All lifting machinery and tackle must carry a load test certificate renewed annually and must have an inspection register.
 - 10.11.2.2. All lifting machinery and tackle has a safe working load clearly indicated.
 - 10.11.3. Monthly inspection and servicing is carried out and daily pre-start checks shall also be conducted on all Lifting Machinery and Tackle,
 - 10.11.4. There is proper supervision in terms of guiding the loads that includes a trained banks man to direct lifting operations and check lifting tackle,
 - 10.11.5. The tower crane bases have been approved by an engineer,
 - 10.11.6. The operators are competent as well as physically and psychologically fit to work and in possession of a medical certificate of fitness which shall be available on site.
 - 10.11.7. A valid logbook shall be maintained for all lifting machinery, which will comply with a minimum six-monthly service and maintenance.
- 10.12. Ladders and Ladder Work
- 10.12.1. The Principal Contractor shall ensure that all ladders are clearly numbered, inspected and reflected on a register.
 - 10.12.2. A competent person shall be identified and appointed as the ladder inspector.
 - 10.12.3. Where aluminium ladders cannot be used, then wooden ladders shall be straight grained and unpainted to allow for proper inspection of the grain for cracking.
 - 10.12.4. Ladders shall be secured at the top and chocked at the base to prevent slipping.
 - 10.12.5. Where chocking of the base is not possible, then the user shall ensure that the ladder is held in position by another employee when ascending the ladder.
 - 10.12.6. Ladders shall be inspected daily before use and once per month by the person appointed as the ladder inspector, and a record kept.
 - 10.12.7. Proper storage shall be provided for all ladders when not in use.
 - 10.12.8. Ladders must be of the correct height for the task, extended at least 1m above the landing, fastened and secured, and at a safe angle.

10.13. General Machinery

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- 10.13.1. The Principal Contractor and relevant Contractors shall ensure compliance with the Driven Machinery Regulations and General Machinery Regulations which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing, and training those who operate machinery.
- 10.13.2. In accordance with General Machinery Regulation 2(1), The Principal Contractor/ Contractor must:
- 10.13.3. Ensure a competent person be appointed as defined in the above clause from the Occupational Health and Safety Act, Act 85 of 1993 and Regulations, to service and maintain all machinery in use on site.
- 10.13.4. The Principal Contractor/ Contractor shall appoint additional competent persons to assist the competent person mentioned above in accordance with General Machinery Regulation 2(7) (a), as and when required.
- 10.13.5. The Principal Contractor / Contractor shall ensure that records are maintained of all services conducted.
- 10.13.6. The Principal Contractor / Contractor shall provide to the TASEZ a copy of the above appointments prior to work commencing on site.
- 10.14. Portable Electrical Tools, Explosive Power Tools, Hand Tools
- 10.14.1. The Principal Contractor / Contractor must ensure the following procedure is adhered to regarding Portable Electrical Tools and Hand tools:
- 10.14.2. Minimum compliance with legislation.
- 10.14.3. Power tools to be well guarded, not overloaded and earthed.
- 10.14.4. No work under wet conditions allowed with power tools.
- 10.14.5. Only competent persons shall be permitted to conduct routine and monthly inspections on the equipment.
- 10.14.6. Persons competent to inspect the equipment must be appointed in writing.
- 10.14.7. Persons must be trained to operate such equipment and must be appointed and shall be the only authorised person to operate the equipment.
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- 10.14.8. The Principal Contractor / Contractor must ensure operation of the equipment is in accordance with an approved Risk Assessment and Safe Working Procedure.
 - 10.14.9. All users must undergo regular awareness training to ensure compliance.
 - 10.14.10. The Principal Contractor/ Contractor must ensure the required PPE and clothing is provided and maintained.
 - 10.14.11. No privately owned or home- made hand tools to be used on site.
 - 10.14.12. All hand tools to be kept in a clean and sound condition.
 - 10.14.13. The right tools for the task to be used.
- 10.15. Electrical Equipment and Installations (CR24)
- 10.15.1. Where high voltage electrical lines are present on the site perimeter, the Principal Contractor must be aware of the location and have to demarcate their position.
 - 10.15.2. These demarcations must be maintained throughout the duration of the construction work. The minimum safety clearances as per Electrical Machinery Regulation 15 must be adhered to.
 - 10.15.3. All installation must comply with SANS 10142 and the regulations of the OHS Act 85/1993.
 - 10.15.4. The Principal Contractor / Contractor must ensure lighting circuits and power circuits are fitted with suitable earth leakage protection systems and installed by an approved authority.
 - 10.15.5. The Principal Contractor / Contractor must ensure that.
 - 10.15.6. Earth leakage system will be tested monthly.
 - 10.15.7. A temporary certificate of compliance is obtained.
 - 10.15.8. All existing services must be assumed live at all times.
 - 10.15.9. Malfunctions shall be repaired immediately or replaced.
 - 10.15.10. Lighting shall be so positioned as not to interfere with construction activities.
 - 10.15.11. Lighting shall be provided to ensure adequate visibility under all conditions.
 - 10.15.12. Lighting and electrical installations shall be weatherproof.
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- 10.15.13. The Principal Contractor / Contractor must ensure operation of the equipment is in accordance with an approved Risk Assessment and Safe Working Procedure.
- 10.15.14. All users must undergo regular awareness training to ensure compliance.
- 10.15.15. The Principal Contractor / Contractor must ensure the required PPE and clothing is provided and maintained.
- 10.15.16. The Principal Contractor / Contractor must ensure the use of flameproof equipment when entering confined spaces where volatile gasses may be present.

10.16. Public and Site Visitor Health and Safety

- 10.16.1. The Principal Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers likely to arise from site activities, including the precautions to be taken to avoid or minimise those dangers.
- 10.16.2. Appropriate Health and Safety notices and signs shall be displayed but shall not be the only measure taken.
- 10.16.3. The Principal Contractor has a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities.
- 10.16.4. Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks.
- 10.16.5. A record of these inductions must be kept on site in accordance with the Construction Regulations.
- 10.16.6. The Principal Contractor to ensure that no unauthorized persons enter the construction area.
- 10.16.7. Principal Contractor to ensure the safe walkways are maintained underneath the scaffolding which will be erected, and shade cloth attached to ensure that rubble and tools do not fall onto the public

10.17. Night Work (Where Applicable)

- 10.17.1. Night work shall only be conducted upon approval of TASEZ / EQPROJECT MANAGERS AND SAFETY SOLUTIONS, with the same safety standard being applied for these activities as required for day work activities.
- 10.17.2. The Principal Contractor must ensure that adequate lighting is provided to allow for work to be carried out safely and to safeguard the health and safety of persons other than employees, e.g. visitors and members of the public.
- 10.17.3. Adequate warning signs e.g. flashing lights and reflectors to be provided to ensure visibility and to serve as warning to employees and other persons in the area of the construction site after dark.
- 10.17.4. In the event where night work is not performed, the construction site may still pose a danger under poor visibility conditions and such warning signs shall then also be displayed.

10.18. Material Hoists

Every materials hoist must comply with the requirements of Construction Regulation 19 including the following:

- 10.18.1. The material hoist structure must be secured from displacement and handed over as "safe for use". A hand over certificate must be issued by the erector and kept in the site Health & Safety File;
- 10.18.2. The hoist must be enclosed at ground level with fences that are at least 2.1 m high;
- 10.18.3. Every Landing must be provided with a gate at least 2.1 m high which must be closed at all times except when the hoist platform is at rest at such platform;
- 10.18.4. The hoist platform must include side panels to contain the loads being transported;
- 10.18.5. The maximum safe working load must be indicated on the platform and may not be exceeded at any time;
- 10.18.6. Only a designated, competent operator may control the hoist operations and this person must be present at all times during hoist operations.
- 10.18.7. A lock out system must be incorporated to ensure that no unauthorised persons operate the hoist;

- 10.18.8. Daily inspections must take place and must be carried out by a competent person appointed in writing for the purpose;
- 10.18.9. Inspection results must be recorded in a register kept in the Health & Safety File on site;
- 10.18.10. No persons may ride on the hoist platform.
- 10.18.11. A notice indicating this must be displayed on the hoist platform;
- 10.18.12. All maintenance records must be recorded in the hoist register and kept on site.

10.19. Use of Cell Phones on Construction Site

The Principal Contractor shall develop and implement a cell phone policy, the policy shall cover the following:

- 10.19.1. High areas where cell phone use is prohibited
- 10.19.2. Provision of safe keeping facilities for cell phones
- 10.19.3. enforcement and disciplinary processes to ensure that the policy is implemented.

11. Occupational Health

11.1. Occupational Health and Hygiene

- 11.1.1. As per CR (8) the Principal Contractor and Contractors must ensure that all his employees have a valid medical certificate of fitness to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.
- 11.1.2. Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction.
- 11.1.3. Occupational health hazards must also be considered during risk assessments as occupational exposure is a major problem and Principal Contractors and Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards.
- 11.1.4. Prevent inhalation, ingestion, absorption and noise.

11.2. Alcohol and Other Drugs

- 11.2.1. The Principal Contractor must not permit any person who is under the influence of an intoxicating liquor or drugs, to enter or remain on site.

- 11.2.2. The Principal Contractor must ensure that no person on site partakes or offer another person the same or is in possession of such intoxicating liquor or drugs.
- 11.2.3. Any person suspected of being under the influence of alcohol or other drugs must be refused entry and the prescribed disciplinary procedure must be followed by the Principal Contractor and TASEZ / EQPROJECT MANAGERS AND SAFETY SOLUTIONS must be informed.
- 11.2.4. Records of such proceedings must be kept and made available to the TASEZ / EQPROJECT MANAGERS AND SAFETY SOLUTIONS on request.
- 11.2.5. An alcohol tester to be available on site.

11.3. Fatigue Management

The Principal Contractor must ensure that site supervision consider and take cognisance of employee behavioural aspects with regard to suffering from potential fatigue symptoms and institute appropriate and effective corrective measures.

11.3.1. Symptoms of Fatigue

- 11.3.1.1. Besides tiredness, the fatigued employee may also experience other symptoms, such as:
- 11.3.1.2. Lethargy, yawning, sluggishness, drowsiness at work;
- 11.3.1.3. Somnolence: wanting to fall asleep or having micro-sleeps or nodding away whilst at work;
- 11.3.1.4. Impaired or lack of attention at work
- 11.3.1.5. Battling to concentrate at work
- 11.3.1.6. Irritability at work
- 11.3.1.7. Battling to make decisions at work
- 11.3.1.8. Noticing that one makes mental errors at work
- 11.3.1.9. Impaired coordination or reaction time and resulting physical errors at work.

11.3.2. Fatigue Controls

- 11.3.2.1. In order to prevent work-induced fatigue, the following practices are observed at work:
- 11.3.2.2. Employees will be trained.

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- 11.3.2.3. Employees who are required to work in fatigue-risk periods are medically tested and certified fit for duty as part of the construction fitness certification by the occupational medical practitioner.
 - 11.3.2.4. The construction supervisor will identify the risk of fatigue-effects and the risk of developing fatigue as a result of the workload or roster and optimize the workload and work rosters.
 - 11.3.2.5. Rostering is done after obtaining input from employees.
 - 11.3.2.6. Rostering takes staff availability and potential abnormal working conditions into account.
 - 11.3.2.7. Rostered schedules identify fatigue risk periods.
 - 11.3.2.8. Rostered schedules are not to be altered, deviated from or subject to shift swapping; any changes must be approved by the construction manager.
 - 11.3.2.9. Employees returning to work after sick leave are subject to the fitness for work procedure.
 - 11.3.3. Fatigue Monitoring
 - 11.3.3.1. All employees are required to perform behavioural observation for signs and symptoms of fatigue in themselves and others. Where the potential for fatigue is identified, the employee must report this to the construction supervisor.
 - 11.3.3.2. Where required, the construction supervisor will interview any affected employees and may require a medical examination by an occupational medical practitioner.
 - 11.3.3.3. Any incident or accident investigation will also always consider the possibility of employee fatigue.
 - 11.3.3.4. Working hours must be communicated to employees.
 - 11.3.3.5. Working hours will generally be from 07:00 to 17:00- Monday to Friday and if permission is obtained for weekend work from EQPROJECT MANAGERS AND SAFETY SOLUTIONS or TASEZ, the same hours will apply.
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- 11.3.3.6. Shift work will be planned if required and working hours will be according to BCEA and working hours will include a tea break of 15 minutes and lunch of 45 minutes.

12. Employee Facilities Management

The Principal Contractor is to ensure that:

- 12.1. Employees are not required to change on site and a container must be available to store personnel belongings.
- 12.2. If employees are required to change as per inclement weather the container will be used.
- 12.3. Eating area will be established and inspected daily and teams will eat at designated eating area which is located at the Principal Contractors site camp.
- 12.4. Hand washing facilities will be provided at the work site. Will be located close to the toilet facility.
- 12.5. Toilet facilities will be situated within walking distance of the work area.
- 12.6. Chemical toilets and portable water is available.
- 12.7. All water sources will be marked for fit or not fit for human consumption.
- 12.8. Employees on site will have drinking water in plastic 20 ltr drums with tap that will be with the supervisor and regularly filled.
- 12.9. Runoff water will fall into drum underneath tap and drum water emptied daily.
- 12.10. Toilets and waste bins are strategically placed and cleaned and cleared regularly.
- 12.11. A toilet provider will be appointed and toilets to be placed at identified points for security and on site for fencing.
- 12.12. Toilets for fencing to be moved as work progresses for each team.
- 12.13. The Principal Contractor is to ensure that the portable toilet provider company will comply with the following:
 - 12.14. Adherence to road signs and speed signs on site and awareness of movement of construction vehicles on site,
 - 12.15. Toilets to be placed where indicated and secured to ensure that not blown over by wind,
 - 12.16. Toilets to be inspected and serviced twice a week on which one service will be on a Friday.
 - 12.17. Correct sanitizing and removal of sewer and handling of chemicals and correct PPE to be used on site and toilets to be offloaded correctly.

- 12.18. All personnel coming to deliver toilets or servicing of toilets must first report to site office to sign induction before allowed on site
- 12.19. Inspection records of toilets will be kept in H&S File.
- 12.20. The provision and maintenance of sufficient toilets on site-1-15 ratio.
- 12.21. The Principal Contractor to ensure all portable chemical toilets will be:
- 12.22. Fixed so as to avoid becoming wind-blown
- 12.23. Sign-written: 'Male' and 'Female' use
- 12.24. Sanitized daily; an inspection and sanitizing record must be kept in the H&S file
- 12.25. Inspected daily and, where bucket collections are in place, emptied at least twice a week and one of these occasions must be on Fridays.

13. Management of Change

- 13.1. The Principal Contractor and Contractors may propose changes to this specification provided that the proposed change is for improving the health and safety standards of the project.
- 13.2. The proposed change/s shall be submitted to the Health and Safety Agent for consideration.
- 13.3. The change/s can only be implemented once the Health and Safety Agent has accepted the proposed change and has satisfied himself that the change will improve the health and safety standards of the project.
- 13.4. Where the client requires additional work to be performed as a result of a design change or an error in construction due to the actions of the client:
 - 13.4.1. The Health and Safety Agent shall provide sufficient safety information and determine the appropriate additional resources needed to execute the required work safely and inform the client in writing of the information and the required resources.
 - 13.4.2. After discussion and agreeing with the client, the client shall make provision for the required resources.
 - 13.4.3. The Health and Safety Agent shall make sufficient Health and safety information and appropriate available to the principal contractor to execute the work safely.
 - 13.4.4. The Principal Contractor shall update its baseline risk assessment and its Health and Safety Plan to include the health and safety information provided by the Health and Safety Agent.

ANNEXURE A – Prescribed

Contents and Numbering System Layout for the Health and Safety File Compilation.

Table 4: Health & Safety File Layout

H&S File Cover Index	
1. Scope of Work	35. PPE Management
2. H&S Specification & BLHIRA (Client)	36. PPE Procedure
3. H&S Plan	37. PPE requirement matrix
4. H&S Plan	38. PPE issue Record
5. Covid 19 Prevention Management Plan	39. PPE Inspection Register
6. Environment Management Plan	40. Contractor Management
7. Fall Protection Plan	41. Client / Principal Contractor Contractual Agreement
8. Etc.	42. Principal Contractor Appointment (CR 5 (1) (k)
9. Construction Work Permit / Notice of Construction Work	43. Section 37 (2) Mandatory Agreement
10. Letter of Good Standing	44. Sub-Contractor Appointment (CR 7 (1) (c) (v)
11. H&S Policy	45. Hazardous & Flammable Substance Management
12. OHS Policy	46. Daily Safe Task Instruction [DSTI]
13. Environmental Policy	47. Traffic Control & Public Safety
14. HIV / Aids Policy	48. Permits
15. Organisation	49. Excavations
16. Organogram	50. Safe Work @ Heights
17. Personnel Information	51. Inspection Registers
18. Legal Appointments	52. Construction Plant, Machinery & Equipment

19. CV's, Training & Competency Certificates	53. H&S Committees
20. CV's	54. Safe Work Procedure [SWP] & Work Instruction [WI]
21. Competency Certificates	55. Safe Work Procedures
22. Global Induction Record	56. Work Instructions
23. Employee Induction Record	57. H&S Inspections
24. Visitor Induction Record	58. Daily Leadership Safety Inspection (DLSI)
25. Safety Talks	59. H&S Inspection Report
26. Medicals	60. H&S Audits
27. H&S Budget	61. Waste Management
28. Emergency Plan & Response	62. Legal
29. Emergency Preparedness & Response Procedure	63. OHS Act No.85 of 1993
30. Emergency Contact Numbers	64. Construction Regulations 2014
31. Emergency Flow Chart (Injuries / IOD)	65. Document Record Management
32. Roll Call List	
33. Method Statements [MS]	
34. Risk Assessments [RA]	

ANNEXURE B – Required Appointment Letters Matrix. (Where Applicable – Example)

Construction Appointment Table

DESIGNATION	LEGAL REFERENCE	TYPE OF CONSTRUCTION WORK WHEN REQUIRED
Assistant to Chief Executive Officer	Section 16 (2) – [Project manager]	All construction work
Assist Construction Manager	CR 8.2	All construction work
Bulk Mixing Plant Operator	CR 20.2	When operating a batching plant
Bulk Mixing Plant Supervisor	CR 20.1	When operating a batching plant
CH&S Agent	CR 5.5 & 5.6	Act on behalf of Client
Confined Space Inspector	GSR 5 (1)	Working in defined confined areas
Construction Health & Safety Officer	CR 8 (5)	All construction work
Construction Manager	CR 8 (1)	All construction work
Construction Supervisor	CR 8 (7)	All construction work
Construction Supervisor Assistant	CR 8 (8)	All construction work
Construction Vehicle Inspector	CR 23.1 (k))	When using construction vehicles / When using mobile plant;
Construction Vehicle Operators	CR 23.1 (d))	When using construction vehicles / When using mobile plant;
Demolition Work Supervisor	CR 14.1	When demolishing

DESIGNATION	LEGAL REFERENCE	TYPE OF CONSTRUCTION WORK WHEN REQUIRED
Designer	CR 6	Prior to and during construction ensure that the applicable safety standards incorporated into these Regulations under section 44 of the Act are complied with in the design;
Electrical Installation & Machinery Controller	CR 24 (c)	When any electrical installations are brought to site or used on site or installed on site
Electrical Installation & Machinery Inspector	CR 24 (e)	When any electrical installations are brought to site or used on site or installed on site
Emergency Evacuation Coordinator	ERWP 9 (1)	In the event of an fire or other emergency condition on site and need to evacuate
Excavation Work Supervisor	CR 13.1 (a)	When excavation work is done
Explosive Fastening Device Controller / Issuer	CR 21 (g) (i)	When explosive powered tools are used
Explosive Fastening Device Inspector	CR 21 (2) (b)	When explosive powered tools are used
Explosive Fastening Device Operator	CR 21 (1) (b)	When explosive powered tools are used
Explosives Manager	Expl R12(1)	When using explosives for blasting
Explosives Supervisor	Expl R 12(3)	When using explosives for blasting
Fall Protection Plan Developer	CR 10.1 (a)	When there is a risk of persons falling
Fall Protection Plan Supervisor	CR 10.1 (b) (c)	When there is a risk of persons falling
Fire Warden / Fighter	CR 29 (i)	Prevention of fire risks
Fire Equipment Inspector	CR 29 (h) / PER 19	Visual inspection of fire equipment on construction sites
First Aider	GSR 3 (4)	All construction work
H&S Training	CR 7 (5) (6)	H&S & Site Induction Training for Employees & Visitors
Hand tool inspector	Section 8	General hand tools used on site
Hazardous Chemical Substance Controller	HCSR 3 (3)	Storage, Handling & use of HCS & flammable liquids on site
Health & Safety Representative	Section 17 (1)	Assist with H&S compliance at workplaces
Health & Safety Officer	CR 5	All construction work
Health & Safety Committee members	OHS Act - Section 19	When more than 20 persons on site for more than 3 months
Health & Safety Committee	OHS Act - Section 19	When more than 20 persons on site for more than 3 months
Health & Safety Committee Chairperson	OHS Act Section 19	When more than 20 persons on site for more than 3 months

DESIGNATION	LEGAL REFERENCE	TYPE OF CONSTRUCTION WORK WHEN REQUIRED
Housekeeping	ERWP 6 CR 27	Responsible for the neatness, tidiness and cleanliness of the site area (a place for everything & everything in its place)
Incident Investigator	GAR 9	When Section 24 incidents occurred and or IOD injuries and or damages resulted
Ladder Inspector	GSR 13A	When ladders are used
Mobile & Lifting Machine & Equipment Inspector	DMR 18 (5) (a) & (b)	When cranes, block and tackle, gantries or A frames are used for lifting; When rigging is done;
Mobile & Lifting Machine Operator	DMR 18 (11)	When cranes, block and tackle, gantries or A frames are used for lifting
Machinery - Supervisor	Section 8 (2) (i) / GMR 4 (3)	When using plant & machinery
Machinery - Operator	GMR 4 (2)	When using plant & machinery
Material Hoist Inspector	CR 19.8	When Material Hoists are used
Material Hoist Operator	CR 19.6	When Material Hoists are used
Mixer Operator	CR 20 (1)	When a concrete mixer is used
Portable Electrical Equipment Inspector	CR 24 / EMR 9	When any portable electrical tools & equipment is brought onto site to perform work activities
Principal Contractor	CR 5.1 (k)	All construction work
Project Manager	Section 16 (2)	All construction work
Risk Assessor	CR 9	All construction work
Rope Access Operator	CR 18.1 (c)	When rope access is performed
Rope Access Supervisor	CR 18.1 (a) & (b)	When rope access is performed
Scaffold Erector	CR 16.1(a) / SANS 10085-1:2003	When scaffolds are used
Scaffold Inspector	16.1(c) / SANS 10085-1:2003	When scaffolds are used
Scaffolding Supervisor	16.1(a) / SANS 10085-1:2003	When scaffolds are used
Stacking & Storage Supervisor	CR 28 (a)	Stacking & storage of construction site materials & equipment
Sub-Contractor	CR 7.1 (c) (v)	When using sub-Contractors
Suspended Platform Operational Compliance Plan Developer	CR 17 (2)	When suspended platforms are used
Suspended Platform Supervisor	CR 17.1	When suspended platforms are used
Suspended Platform Erector	CR 17 (2)	When suspended platforms are used
Suspended Platform Inspector	CR 17 (8) & (9)	When suspended platforms are used

DESIGNATION	LEGAL REFERENCE	TYPE OF CONSTRUCTION WORK WHEN REQUIRED
Temporary Works Designer	CR 12.1	When form work is used / When support work is used / Any false work / Shoring work
Temporary Works Supervisor	CR 12.2	When form work is used / When support work is used / Any false work / Shoring work
Temporary Works Inspector	CR 12 (3) (f)	When form work is used / When support work is used / Any false work / Shoring work
Tower Crane Supervisor	CR 22 (a)	When tower cranes are used
Tower Crane Erector		When tower cranes are used
Tower Crane Operator	CR 22 (e) & DMR 18 (4)	When tower cranes are used
Tower Crane Inspector	DMR 18	When tower cranes are used
Tunnelling	CR 15	When tunnelling work is done

Acknowledgement by:

Principal Contractor

Construction Health & Safety Specification

issued in terms of the Occupational Health and Safety Act, 1993 Construction Regulations, 2014

TASEZ Phase 2 Development: Construction of New Bulk Water Reticulation Infrastructure for the TASEZ Phase 2 Programme

I, _____ (name)
representing (the Principal Contractor: _____) have satisfied
myself with the content of this Construction Occupational Health and Safety Plan and shall
ensure that the Principal Contractor, all Contractors and sub-Contractors and all Employees
on site comply with it.

Sign On behalf Principal Contractor

Date

Name of Contractor's Representative

Designation