



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

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Client	eThekwini Municipality Road Provision
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1. PROJECT DESCRIPTION AND SITE ACCESS

Shallcross/Blundell Road is situated in the south of Durban, in Queensburgh area. The road connects Shallcross to Queensburgh. The road is a 2-lane road which crosses over the Umhlatuzana River via a low-level culvert crossing. During the 2019 and 2022 floods the river washed away the roads infrastructure and damaged the culvert. This contract aims to remove the

low level crossing and replace it with a new bridge structure to span over the Umhlatuzana River

2. LIMITATIONS OF LIABILITY

The Principal Contractor shall enter into a Mandatory Agreement with the Client, as defined in Section 37(2) of the Occupational Health and Safety ACT.

The Principal Contractor shall ensure that each contractor appointed by the principal Contractor and each sub-contractor appointed by a contractor also into a Mandatory Agreement with the Principal Contractor, as defined in Section 37(2) of the Occupational Health and Safety ACT. These agreements shall be included in the Principal Contractor's H&S File on site and be valid for the duration of the contractors' work on the construction site.

3. PURPOSE OF THE CONSTRUCTION SPECIFICATION

This document defines the minimum management requirement that is to be implemented by the Principal Contractor/ Contractor for the management of Health and Safety on any eThekwin Municipality project.

The aim of this document is to present the health and safety aspects that need to be controlled and managed on the project.

This Health and Safety specification identifies and encompasses the working behaviors and safe work practices that are expected of all employees, Vendors and Contractors, Sub-Contractors and Visitors, engaged on construction site.

Providing a guideline to comply with best Health & Safety practices and the Occupational Health and Safety Act 85/1993 as amended, including reference to applicable legislative requirement.

4. PROJECT HEALTH AND SAFETY COST

The Client must ensure that potential Principal Contractor submitting tenders have made adequate provision for the cost of health and safety measures.

The Principal Contractor shall allow in their cost provision for complying with the requirements of this Construction Health and Safety Specification; resources for the following Health and Safety controls shall be in place.

NO.	H&S cost item	Description
1.	Construction Health and Safety Officer	A part-time Construction health and safety officer is required to ensure that the health and safety plan is implemented on site.
2	Medical certificate of fitness	Medical examination of all employees and certification of fitness by an Occupational Medicine Practitioner
3	Personal Protective Equipment	Personal Protective Equipment to be provided as per risk exposure, including but not limited to hands protection, and face protection
4	Public protection	To reduce risk exposure to the employees and members of the public
5	Employee facilities	Drinking water, ablution toilet etc..
6	Trainings and competency	Electrician, Risk assessor, Incident Investigator and Firefighter, first aider, Fall protection
7	Safety file	Full completed with all documents
8	Health and safety signage	All signatures must be displayed

5. SCOPE OF WORK

Roadworks

The construction of new roads Including but not limited to, earthworks, layerworks, kerbing, lane marking and signages. This project comprises of the following roads (refer to plan and typical cross sections):

Shallcross/Blundell Road, chainage 30 to 470.

Water Treatment Plant (WTP) road, chainage 15 to 145.

Temporary road: Temporary road works will be required to construct the new roads.

Bridges

The construction of a new 90m long Blundell Road Bridge crossing over the Umhlatuzana River, comprising of 4 spans made up of 2 no. of 20 m end spans and 2 no. centre spans of 25 m.

The bridge has a 40 m straight section and a 50 m curved section

The deck shall be poured/cast in 4 construction stages or concrete pours during the night at low temperatures when the formwork is relatively cool. The abutments shall also be poured during the night or early mornings (subject to relatively low volume concrete

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pours) at low temperatures when the formwork is relatively cool. Due to the relatively thick deck and abutment sections, the aim is to keep to the design ambient temperatures and reduce as much stress and strain in the concrete elements by limiting the heat of hydration and several other factors.

The Contractor shall ensure all provisions for the night pours or early mornings are in order.

The proposed bridge structure will comprise a solid slab reinforced concrete bridge deck of 14.5 m constant width over the full length. The bridge is fully monolithic (concrete integral bridge). The deck has haunches at each of the 3 wall piers.

The bridge has 3 wall piers in the riverbed which are monolithic and flare out laterally near the deck soffit. At both abutments, reinforced concrete wall abutments support the deck slab. The abutments are fully fixed to the deck and these deck stages which fix the deck to the abutments shall be cast last, as per stage sequence shown on drawings.

Concrete foundations in the riverbed shall be placed on leveled out the sandstone in the riverbed and shall include dowels in the base.

The 14.5 m wide deck will consist of barriers, handrails and sidewalks on either side of the deck. The sidewalk is to accommodate a multitude of services such as a watermain, electrical cables, street lighting cables and telecom cables.

The wall abutments shall be founded on rock and/ or founded on mass concrete which shall be placed on sound rock material. The abutments comprise independent counterfort

retaining walls on one abutment, and the other abutment comprises independent retaining walls without counterforts.

The contractor shall carefully study the proposed construction sequence drawing, as each of the 4 no. deck construction stages shall be securely propped at the centre of the deck for a specific distance, props which shall be part of and inclusive of falsework & formwork and shall remain even after full concrete strength is attained. All props shall only be released when full deck is monolithically connected to all the piers and abutments.

Extensive embankment protection to the abutments is required at the front of the abutments and this shall involve working in the river.

The bridge shall be monitored via several different sensors and monitoring devices which will be attached, installed and embedded in the bridge during construction by a specialist nominated subcontractor. The aim is to better understand integral bridge behaviour and develop guidelines for the industry.

The Contractor shall make full provisions in his/her programme and assist the specialist subcontractor during the installation of the monitoring devices. Detailed instrumentation layout drawings shall be provided at construction stage.

The bridge has a special aesthetic waved pattern fence/ cage at the edges for pedestrians on both sides. The bridge also has a high quality, polished finish of precast concrete curved copings at the bridge deck and wingwall edges.

Demolition

Removal and disposal of existing reinforced concrete box culvert structure of +-30 m, including barriers and a base slab, as directed by Engineer. Demolished structure is to be broken up and the reinforcing steel separated out and disposed of, after which the remaining concrete is to be placed on site as fill material.

Retaining Wall

Retaining walls Gabions and Dry stack (interlocking) walls of height upto 3.0m.

Stormwater

A new stormwater system will be laid under this scope of works. The stormwater system will comprise of concrete pipes ranging in size from 375mm diameter to 750mm diameter. There will be various types and sizes of new catchpits, manholes and headwalls.

Sewer

A sewer servitude runs across the road at approx. Ch30-230 with a 160mm diameter pipe.

Relocation of this pipe is required and protection of the existing and new pipe will be required throughout the construction.

Should traffic accommodation be carried out over the sewer line area the relocation of this pipe must take the traffic accommodation into consideration. The Employers Agent should be informed of the traffic accommodation plans and its impacts on this pipe.

Sidewalks and Medians

Sidewalks will be of a 2.0m width unless otherwise specified on the drawings. The majority of sidewalks and medians will be constructed using asphalt. Verges, grassed or not, will be of 1.0m in width unless otherwise specified in the drawings. The sidewalks over the bridge will be of 2.0m width and constructed using concrete.

Kerbs

The kerbing will comprise of the following:

- Type A, Figure 6 Barrier Kerbs including channels and fillets,
- Figure 12 edge restraint kerbs at the back of the sidewalks.

6. COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT

The Principal Contractor, each contractor and each sub-contractor shall submit proof of Good Standing with CODA Commissioner or a Mutual Association licensed in terms of Section 30 of COIDA, prior to starting any work on site. A copy of the Letter of Good Standing with COIDA Commissioner must be included in the H&S Plan of each contractor working on the site and must remain updated for the duration of the construction work.

7. NOTIFICATION OF CONSTRUCTION WORK

The Principal Contractor must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

Include excavation work.

Include working at a height where there is risk of falling.

Include the demolition of a structure; or

Include the use of explosives to perform construction work.

A contractor who intends to carry out construction work that involves construction of a single-story dwelling for a client who is going to reside in such dwelling upon completion, must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure

8. MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

During the submission of your health and safety file for approval, please ensure that at least the following appointments are submitted with the file:

- Construction manager CR8(1)
- Construction work supervisor CR8(7)
- Construction health and safety officer CR8(5) — part-time
- Risk assessor CR9(1)
- Incident investigator GAR9(2)
- Electrical installation controller EIR5(4) and proof of registration with DOL as an electrical installer or contractor
- Fall protection planner

8.1 Construction Manager

The Principal Contractor shall appoint in writing a full-time competent person as the construction manager with the duty of managing all construction on the site including the duty of ensuring occupational health and safety compliance. The Construction Manager must demonstrate competency in relation to work being performed and the ability to manage construction work which may include making all statutory appointments in terms of health and safety.

8.2 Construction health and safety officer

The Principal Contractor shall appoint a part-time competent Construction Health and Safety Officer for the construction work, with at least 1 years in the construction industry as a construction health and safety officer.

8.3 Construction supervisor

A Construction Manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in sub regulation (7), and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this Regulation.

9. PRINCIPAL CONTRACTOR'S HEALTH AND SAFETY PLAN

The Principal Contractor shall submit a suitable, sufficiently documented, and coherent specific health and safety plan based on the Client documented Health and Safety Specification. The health and safety plan shall include but not limited to the following:

- Objectives
- Scope of work
- Management of construction and supervision
- Monitoring and review plan
- Sub-contractor management
- CODA
 - Risk Assessment & Safe Working Procedures
 - Incident Management
 - First Aid
 - Emergency procedures
 - Fire Prevention & Protection
 - Public Health and Safety
 - PPE provision
 - Health & Safety Signage
 - Construction Vehicles and Mobile Plants
 - Hand tools management
 - Electrical Tool Management
 - Electrical installation on construction site
 - Construction Employees Facilities
 - Health & Safety Policies
 - Health and Safety Training & Competencies
 - Housekeeping

- Inductions
- Medicals
- Stacking and Storage
- Internal and external Audit
- Inspection Registers
- Toolbox Talks
- Carrying out construction work in a residential place
- Hot works
- Fall protection

10. HAZARD IDENTIFICATION AND RISK ASSESSMENT

The Principal Contractor shall before commencement of any construction and during such construction works have risk assessments performed by appointed competent person in writing which forms part of the health and safety plan to be applied.

The provisions of Regulation 9 of the Construction Regulations shall be followed in every detail.

11. HEALTH AND SAFETY FILE

The Client must discuss and negotiate with a Principal Contractor the content of the Health and Safety Plan and thereafter finally approve the Health and Safety plan for implementation. The recommended Health and Safety file shall include the following:

- SHE Policy
- PPE Policy
- Notification of Construction work
- Client Health & Safety Specification and Baseline
- Principal Contractor Health & Safety Plan
- Letter of good standing
- Section 37.2 Mandatory Agreement
- Contractor appointment letter in terms of CR 5.1 (k)
- Legal appointments and competencies
- Risk Assessments as per scope of work
- Safe Working Procedures for each task
- Incident/Accident Management Procedures
- LOA from SCM
- Organogram as per appointments
- Copy of OHS Act and Construction Regulations 2014
- Health and Safety Induction program me
- Emergency Procedures
- Medical Certificate of fitness
- Toolbox Talks Program me/ Plan ● Fall protection plan

12. CLOSE- OUT CONSOLIDATED HEALTH AND SAFETY FILE

The Principal Contractor shall compile a consolidated H&S file and hand over to eThekweni municipality, Human settlements Unit (project manager responsible for the project). OHS Unit will conduct a project close out using the appropriate checklist before the completion of the project. The closeout file forms part of the project completion requirements for the retention payment.

13. HEALTH AND SAFETY TRAINING

The Principal Contractor shall ensure that employees are trained on health and safety measures this shall include but not limited to:

- Written Safe Working Procedures
- Risk Assessments
- Health and Safety Plan and other policies
- Fall protection plan
- Emergency Procedures/ Plan
- Incident management procedures
- Induction
- Toolbox Talks

14. INCIDENTS MANAGEMENT & FIRST AID

All incidents and accidents as per Section of the Act must be reported, recorded and investigated as per General Administration Regulation 8 & 9. Where a fatality or permanent disabling injury or incident occurs on the Construction site, the Client must ensure that the Principal Contractor provides the Provincial Director with a report contemplated in Section 24 of the Act and the report includes the measures that the Principal Contractor intends to implement to ensure a safe construction site.

15. HEALTH AND SAFETY AUDITS

The Client must ensure that periodic health and safety audits are conducted at intervals mutually agreed upon between the Principal Contractor and the Client at least every 30 days, the copy of the health and safety audit report must be provided to the Principal Contractor within seven days after the audit.

16. FIRE PRECAUTIONS ON CONSTRUCTION SITE

The Principal Contractor shall provide suitable fire extinguishers which shall be serviced regularly in accordance with the manufacture's recommendations. Safety signage shall be prominently displayed in all areas where fire extinguishers are located. The Principal Contractor shall arrange for training of the relevant personnel, in the use of fire extinguishers.

The provisions of Regulation 29 of the Construction Regulations as well as Regulation 9 of Environmental Regulation for Workplaces shall be followed in every detail.

17. ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITE.

The Principal Contractor shall designate a competent electrician in writing who shall control all electrical installations. All temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site. All Electrical machinery is inspected by the authorized operator or user on daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

The provisions of Regulation 5, 6 & 9 of the Electrical Installation Regulations shall be followed in every detail.

18. PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

The Principal Contractor shall ensure that every employee is issued with, and wears SANS-approved P.P.E. as per the conducted risk assessment. Failure to use protective equipment as per the risk assessment shall require disciplinary intervention and this process shall be documented in the induction. No employer shall in respect of anything which he is in terms of this Act required to provide or to do in the interest of health or safety of an employee make any deductions from any employee's remuneration or require or permit any employee to make any payment to him or to any other person.

The provisions of Regulation 2 of the General Safety Regulations shall be followed in every detail.

19. OCCUPATIONAL HEALTH AND SAFETY SIGNAGE

The Principal Contractor shall erect and maintain quality safety signage. The signage shall include but is not limited to:

- The construction work permit number displayed at the entrance (if applicable) ● Access restrictions
- A sign indicating that all visitors must report to the site office and must be accompanied by the Principal Contractor when accessing the site ● The name and telephone number of the responsible person(s)
- Emergency telephone number(s)
- PPE to be worn at the site
- When falling objects may occur, relevant barricading and warning signs must be erected
- Excavations, heights structures, temporary structures and all risk areas must be indicated as per the specific methods defined in the H&S Plan.

20. DUTIES OF PRINCIPAL CONTRACTORS AND CONTRACTORS

Contractors and sub-contractors must be given a copy of the H&S specification and any additional specification issued by the Client and shall comply with these specifications integrally. All employers working on the site shall conform to the standard in the CHSS. All the duties of the Principal Contractor in this CHSS equally apply, in full, to contractors of such Principal Contractor and to sub-contractors of such contractors. The Principal Contractor shall ensure that the comprehensive and updated list of all the contractors and sub-contractors on site includes:

- A reference to the agreements between the parties, including all contractors
- Section 37(2) agreements with the Principal Contractor
- The type of work being done
- The date of the approval of the H&S Plan
- The date of expiry of the COIDA certificate of good standing ● The date of the last monthly audit

The provisions of Regulation 7 of the Construction Regulations shall be followed in every detail.

21. PUBLIC HEALTH AND SAFETY

The site shall always be secured to prevent the unauthorized access of persons to construction risk areas. Appropriate health and safety signage shall be posted and access control to site must be exercised via a single access point. All members entering the site must indicate in what capacity they are visiting the site. The access point must be designed and constructed to allow for temporary parking, entry of construction vehicles, entry of personnel transport vehicles and entry of individual workers and other persons. The principal Contractor shall ensure that each person visiting the site shall be inducted to the site and such abridged induction shall outline the hazards from on-site activities and the precautions to be observed to avoid or minimize those risks. Visitors must only enter when accompanied by a responsible person designated by the Principal Contractor.

22. CONSTRUCTION EMPLOYEES FACILITIES

The Principal Contractor shall provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities: (a) Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons; (b) at least one sanitary facility for each sex and for every 30 workers; (c) changing facilities for each sex; and (d) sheltered eating areas.

The provisions of Regulation 2, 3, 4, 6, 7, 9 of the Facilities Regulations shall be followed in every detail.

23. HOUSEKEEPING AND GENERAL SAFEGUARDING ON CONSTRUCTION SITE

The Principal Contractor shall appoint a person responsible for general housekeeping and stacking and storage of materials and equipment on the entire site.

The provisions of Regulation 27 of the Construction Regulations shall be followed in every detail.

24. CONSTRUCTION MEDICALS

A Principal Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an Occupational Health Practitioner in the form of Annexure 3.

25. HEALTH AND SAFETY REPRESENTATIVE AND SHE COMMITTEE

Health and Safety Representatives

- The Principal Contractor shall ensure that Health and Safety Representatives are appointed in writing and exercise their functions as defined in OHSA.
- The Principal Contractor shall elect and appoint a health and safety representative regardless of the number of employees on the site.
- The H&S representative shall always be on site and report to the Health and Safety Officer and Construction Manager.

Health and Safety Committee

- The Principal Contractor shall ensure that the H&S committee meets monthly
- The Principal Contractor's management and each contractor shall be represented at the H&S committee meeting; contractors with more than 20 employees shall have an H&S representative at each committee meeting and each contractor shall have a management member attending each H&S committee meeting.

26. STACKING AND STORAGE ON CONSTRUCTION SITE

A Principal Contractor must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that—

A competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site; Adequate storage areas are provided; are demarcated storage areas; and storage areas are kept neat and under control.

27. EMERGENCY PROCEDURES/ PLAN

Principal contractor shall submit a detailed Emergency Procedures/ Plan for approval by the client prior to commencement of work on site. The procedures shall detail the response plan including the following:

List of key competent personnel
Details of emergency services
Action or steps to be taken in the event of emergencies
Information on hazardous material
Emergency events relevant to the project

28. INDUCTION AND TOOLBOX PROGRAMME

No contractor may allow or permit any employee or person to enter any site unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training contemplated in sub-regulation (6) and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor; The Principal Contractor must ensure that the toolbox talks are conducted on weekly basis and the training records kept on the safety file.

29. CONSTRUCTION VEHICLES AND MOBILE PLANTS

For any use of construction vehicle and mobile plant in the construction site, contractor must comply with all the provisions of Construction Regulation 23.

30. ORGANOGRAM

Contractor shall submit an organogram outlining the site safety, health and environmental management structure as per appointment. The organogram must reflect the project and the company name and must have legal references.

31. CARRYING OUT CONSTRUCTION WORK IN A RESIDENTIAL PLACE

The contractor must highlight the approach on how he/ she will ensure cooperation with other affected parties in the area e.g., Residents, Local businesses ect.