

[illegible]

		project		Total Average Risk Value	50%	per requirement	must dispose off sludge, rubble and hazardous waste to registered waste management facility and keep records.	
	Scaffolding	Unsafe scaffolding, offloading of scaffold material, incompetent scaffold erectors,		Total Average Risk Value	55%	Mandatory or as per requirement	1. Competent person/s appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Inspected: - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept Method statement developed where explosives will be/ are used	Principal Contractor

8	Eletrical Instalation	1. Incomplitent Eletrical Contractor	1. Health & safety (I)	2		2	1	5	125	5	5	50	40%	Mandatory or as per requirement	1. Only compilent contractor is allowed to do Eletrical instalation. 2. Principal contractor must appoint comitent person for eletrical work	Principal Contractor
			2. Cost (C)		2	2	1	5	125	5	5	50	40%			
			3. Productivity (P)		2	2	1	5	125	5	5	50	40%			
			4. Environment (E)		3	3	1	5	125	5	5	75	60%			
				Total Average Risk Value									45%			

9	Water reticulation	1. Incompetent supervisor 2. Trench can collapse 3. Man machine interaction, 4. Water with pressure, 5. Damage to existing services during excavations.	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>4</div> <div>2</div> <div>3</div> <div>2</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>100</div> <div>50</div> <div>75</div> <div>50</div>	<div>80%</div> <div>40%</div> <div>60%</div> <div>40%</div>	Mandatory or as per requirement	1. Principal contractor must appoint competent supervisor for supervision of construction work and plumbing operations. 2. Appointed Excavation supervisor must monitor the excavation and keep records of excavation register. 3. Employees must keep safe distance from moving machinery and wear appropriate PPE, Safety vest. 4. Supervisors must develop Safe work procedure for valve installation and maintenance. 5. Principal contractor must refer to construction drawing and wayleave prior to commencement of excavation.	Principal Contractor
11	Stormwater channels	1. Incompetent supervisor 2. Trench can collapse 3. Man machine interaction, 4. Damage to existing services during excavations	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>5</div> <div>5</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>25</div>	<div>100%</div> <div>100%</div> <div>100%</div> <div>20%</div>	Mandatory or as per requirement	1. Principal contractor must appoint competent supervisor for supervision of construction work. 2. Appointed Excavation supervisor must monitor the excavation and keep records of excavation register. 3. Employees must keep safe distance from moving machinery and wear appropriate PPE, Safety vest. 5. Principal contractor must refer to construction drawing and wayleave prior to commencement of excavation.	Principal Contractor
10	Use of portable electrical tools and hand tools	1. Unsafe, sub-standard and/or defective equipment used Untrained employees using portable electrical tools	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>3</div> <div>3</div> <div>3</div> <div>3</div>	<div>3</div> <div>3</div> <div>3</div> <div>3</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>75</div> <div>60%</div> <div>60%</div> <div>60%</div>	Mandatory or as per requirement	1. All portable electrical equipment to be logged on a register and monthly inspections to be conducted. 2. Pre use checklists to be implemented, conducted and maintained 3. Employees to be trained on use of portable electrical tools	Principal Contractor
11	Electrical work	1. Incompetent person doing electrical work. 2. Electrician and fire	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>3</div> <div>2</div> <div>2</div> <div>1</div>	<div>3</div> <div>2</div> <div>2</div> <div>1</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>25</div>	<div>60%</div> <div>40%</div> <div>40%</div> <div>20%</div>	Mandatory or as per requirement	1. Only competent person is allowed to do electrical work on site. 2. Incompetent Contractor is allowed to do electrical work 3. Legally appointed Fire fighter, fire extinguisher and first Aider must be in place for in case of emergency.	Principal Contractor
12	Loading and Offloading	1. Improper loading and unloading 2. Incompetent operators deployed	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>3</div> <div>3</div> <div>2</div> <div>2</div>	<div>3</div> <div>3</div> <div>2</div> <div>2</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>50</div>	<div>60%</div> <div>60%</div> <div>40%</div> <div>40%</div>	Mandatory or as per requirement	1. Pre-use inspections to be conducted on truck mounted crane 2. Truck mounted crane operator to be licensed and appointed in writing 3. Truck mounted crane to be accommodated with a valid load test certificate, crane hook certificate 4. Full maintenance record of crane to be available 6. Ensure 3 point contact when climbing on and off the truck. 7. Ensure loads are stable when loading and offloading. 8. All material/equipment that is sling to be lifted must be checked before lifting takes place and locked down in register.	Principal Contractor
13	Use of chemicals	1. Improper storage of chemicals, transportation and handling	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>2</div> <div>2</div> <div>2</div> <div>3</div>	<div>2</div> <div>2</div> <div>2</div> <div>3</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>75</div>	<div>40%</div> <div>50</div> <div>40%</div> <div>60%</div>	Mandatory or as per requirement	1. HCS to be properly stored in a cool locked store room 2. HCS to be safely transported to the work place and no HCS to be stored in a work place, only quantity used. 3. Employees handling hazardous chemical substance to be trained. Possible preventive measures to be put in place in order to prevent harm to employees. PPE to be used when necessary.	Principal Contractor
14	Laying stormwater pipes and Construction of	1. Incompetent person supervising excavation work 2. Trench can collapse 3. Storm water pipes can fall into employees 4. Insects and snakes	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>2</div> <div>2</div> <div>2</div> <div>1</div>	<div>2</div> <div>2</div> <div>2</div> <div>1</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>25</div>	<div>40%</div> <div>40%</div> <div>40%</div> <div>20%</div>	Mandatory or as per requirement	1. Excavation work must be supervised by legally appointed excavation supervisor. 2. Excavation supervisor must inspect excavation and keep records 3. Supervisor must develop safe method of laying storm water pipes. 4. Employees must report to supervisors if they see insects or animals. Competent personnel must be called to site so that they can handle the situation.	Principal Contractor
15	Roofing	1. Overhead cables 2. Incompetent Supervisor 3. Poor planning of works 4. Falling from heights 5. Cut injuries	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>4</div> <div>4</div> <div>4</div> <div>4</div>	<div>4</div> <div>4</div> <div>4</div> <div>4</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>100</div> <div>80%</div> <div>80%</div> <div>80%</div>	Mandatory or as per requirement	1. Principal contractor must conduct Risk assessment and safe work procedure prior to commencement of work. 2. Principal Contractor must appoint competent Supervisor for construction work. 3. Competent supervisor must demarcate/baricade. 4. All employees working on site must be familiar with fall protection plan. 5. Principal contractor must issue appropriate PPE, Safety Harness, Safety Shoes, Work suit, Safety Glasses and gloves. 6. Principal Contractor must provide life line and it must be installed by competent person, equipment used must be calibrated. 7. Life line must be inspected by competent person and must be declared safe prior to use.	Principal Contractor
16	Working on Heights	1. Personal Injury 2. Fatality	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>5</div> <div>5</div> <div>4</div> <div>2</div>	<div>5</div> <div>5</div> <div>4</div> <div>2</div>	<div>1</div> <div>1</div> <div>1</div> <div>2</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>20</div> <div>125</div> <div>125</div> <div>125</div>	<div>500</div> <div>5</div> <div>5</div> <div>50</div>	<div>25%</div> <div>100%</div> <div>80%</div> <div>40%</div>	Mandatory or as per requirement	1. Designate a competent person to be responsible for the preparation of a fall protection plan. 2. Ensure that the Fall protection plan and Risk assessment is implemented, amended and maintained. 3. Take steps to ensure continued adherence to the fall protection plan. 4. The fall protection plan must include but not limited: A Risk assessment of all work carried out from a fall risk position, procedures and methods used to address all the risks identified. 5. Appointed 16 (2) to ensure that employees comply with Construction regulations 10 Fall protection.	Principal Contractor
18	Retaining walls	1. Falling objects 2. Lifting heavy material	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>3</div> <div>3</div> <div>3</div> <div>3</div>	<div>3</div> <div>3</div> <div>3</div> <div>3</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>75</div> <div>60%</div> <div>60%</div> <div>60%</div>	Mandatory or as per requirement	1. Ensure vehicles are isolated when not in operation 2. Employer must provide awareness on ergonomics. 3. Principal Contractor must conduct method statement, Risk Assessment and Safe work procedure for building retaining wall. 4. Principal Contractor must comply to Engineers design.	Principal Contractor
19	Moving vehicles on public road during construction	1. Injury to people 2. Damage to equipment	<div>1. Health &amp; safety (I)</div> <div>2. Cost (C)</div> <div>3. Productivity (P)</div> <div>4. Environment (E)</div>	<div>3</div> <div>3</div> <div>3</div> <div>2</div>	<div>3</div> <div>3</div> <div>3</div> <div>2</div>	<div>1</div> <div>1</div> <div>1</div> <div>2</div>	<div>5</div> <div>5</div> <div>5</div> <div>5</div>	<div>125</div> <div>125</div> <div>125</div> <div>125</div>	<div>5</div> <div>5</div> <div>5</div> <div>50</div>	<div>60%</div> <div>60%</div> <div>60%</div> <div>40%</div>	Mandatory or as per requirement	1. Keep safe distance from moving machinery. 2. Wear reflective vests 3. Don't cross or leave work area without permission 4. Draft, implement and maintain a proper traffic management plan.	Principal Contractor

20	Rehabilitation of affected area	1. Damage to environment 2. Personal injury.	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>4</div><div>4</div><div>4</div><div>1</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>125</div><div>125</div><div>125</div><div>125</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>100</div><div>100</div><div>100</div><div>25</div></div> <div><div>80%</div><div>80%</div><div>80%</div><div>20%</div></div>	Mandatory or as per requirement	1. Principal Contractor must conduct method statement, HIRA and Safe work procedure for rehabilitation of affected area. 2. Work area to be barricaded and demarcated. 3. Principal Contractor must take care of the environment and conduct awareness to all employees, comply to environmental Act.4. Principal Contractor must manage machinery/Mobile plant and make sure that employees are safe.	Principal Contractor
22	Emergency Preparedness (Fire Fighting equipment insufficient)	1. Injury to people 2. Property and equipment damage	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>2</div><div>2</div><div>2</div><div>2</div></div> <div><div>2</div><div>2</div><div>2</div><div>2</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>50</div><div>40</div><div>12</div><div>2</div></div> <div><div>40%</div><div>32%</div><div>10%</div><div>2%</div></div>	Mandatory or as per requirement	1. Fire fighting equipment must be in place accordance to survey conducted during site establishment. 2. Identification and signage must be clear and visible. 3. All relevant equipment to be inspected and on register.	Principal Contractor
23	Site security and public protection	1. Public gaining access to the construction site.	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>4</div><div>4</div><div>4</div><div>2</div></div> <div><div>4</div><div>4</div><div>4</div><div>2</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>100</div><div>100</div><div>100</div><div>50</div></div> <div><div>80%</div><div>80%</div><div>80%</div><div>40%</div></div>	Mandatory or as per requirement	1. Principal contractor to ensure the project is secure at all times. Access control to be maintained and no unauthorised entry to be permitted to the project. 2. When there are no activities on site and no personnel conducting works. The Project has to be left in a safe manner that the public cant gain access and that all hazards are attended to prior vacating the site.	Principal Contractor
24	Ablution facilities	1. 1. Use of untidy facilities putting employees at risk of contracting various infections and sicknesses	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>2</div><div>1</div><div>1</div><div>2</div></div> <div><div>2</div><div>1</div><div>1</div><div>2</div></div> <div><div>1</div><div>1</div><div>1</div><div>2</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>40</div><div>12</div><div>12</div><div>24</div></div> <div><div>32%</div><div>10%</div><div>10%</div><div>19%</div></div>	Mandatory or as per requirement	1. Adequate, clean and ablution facilities to be provided by employer.	Principal Contractor
25	Safe guarding / Dealing with existing Structures	1. Damage to existing services and structures.	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>75</div><div>60%</div><div>60%</div><div>60%</div></div>	Mandatory or as per requirement	1. Ensure identification off all existing services and structures before commencing with site establishment.	Principal Contractor
26	Emergency Preparedness (Fire Fighting equipment insufficient)	1. Injury to people 2. Property and equipment damage	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>2</div><div>2</div><div>2</div><div>2</div></div> <div><div>2</div><div>2</div><div>2</div><div>2</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>50</div><div>40</div><div>12</div><div>2</div></div> <div><div>40%</div><div>32%</div><div>10%</div><div>2%</div></div>	Mandatory or as per requirement	1. Fire fighting equipment must be in place accordance to survey conducted during site establishment. 2. Identification and signage must be clear and visible. 3. All relevant equipment to be inspected and on register.	Principal Contractor
27	Installation of fence	1. Transportation and handling of fence. 2. Use of ladders 3. Use of scaffolding	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>3</div><div>3</div><div>3</div><div>3</div></div> <div><div>3</div><div>3</div><div>3</div><div>3</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>75</div><div>60%</div><div>60%</div><div>60%</div></div>	Mandatory or as per requirement	1. Rolls of fence to be transported mechanically. 2. Proper PPE and suitable hand gloves to be provided to employees involved. 3. Ladders to be inspected by a competent person appointed in writing and to be well positioned and secure when in use. No wooden ladders to be used.	Principal Contractor
28	Concrete Mixing and Pouring (Manually and Mixer)	1. Concrete spillages 2. Use of hand tools 3. Oil spillages 4. Dust generation 5. incompetent operators 6. Miscommunication between operator and flagman 7. Mixer operating near excavation	1. Health & safety (I) 2. Cost (C) 3. Productivity (P) 4. Environment (E)	<div><div>3</div><div>3</div><div>2</div><div>2</div></div> <div><div>3</div><div>3</div><div>2</div><div>2</div></div> <div><div>1</div><div>1</div><div>1</div><div>1</div></div> <div><div>5</div><div>5</div><div>5</div><div>5</div></div> <div><div>75</div><div>60%</div><div>40</div><div>100%</div></div>	Mandatory or as per requirement	1. concrete mixers to be regularly serviced in order to prevent breakdown leading to oil spillages. Spot checks to be done prior each shift. 2. All hand tools to be inspected by a competent person. 3. When concrete is being poured, concrete spillages to be prevented and plastic sheet to be placed on the ground when spillages cannot be prevented. 4. Concrete washout area to be created where concrete run off will be discharged. 5. A flagman must be well trained in order for him to be able to provide proper signals thus preventing employees being hit by a mixer. 6. Operators to be well trained and no unauthorized employees must operate the mixer. 7. Dust mask must be provided to employees handling cement as a last resource when dust cannot be controlled. 8. Concrete mixer must keep a distance from excavations, when pouring into excavation flagman have to be more vigilant and a regular toolbox talks must be held. 9. Task specify risk assessment for all activities must be developed and communicated.	Principal Contractor