

Policies and Legislation

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Health and Safety Manual

Company Safety Policy

E1 electrical is committed to providing and maintaining a strong safety program to protect workers, company property, and the public. Our goal is to achieve a healthy and injury free workplace for everybody. All employees at every level are responsible for, and accountable to, these safety initiatives. Individual commitment from each employee, supervisor, and member of management is paramount to ensure we achieve our goal of a safe and productive work environment.

Management is committed to their responsibility of supporting the employee by identifying hazards and implementing proper controls, as well as providing the necessary equipment, training and written procedures to carry out all work in the safest way possible. Each employee will protect their own health and safety and that of their coworkers by participating in the safety program, following all safety procedures, and assisting in the hazard identification process.

Everybody is required to comply with all Occupational Health and Safety regulation and code, a written copy of the legislation is available for employees to familiarize themselves with at the shop. Office personnel will produce it when requested.



Health and Safety Manual

Assignment of Responsibility and Accountability for Health and Safety

Managers:

- Provide a Statement of Policy relating to the health and safety program. The statement provides a commitment and philosophy that sets levels of expectations for health and safety performance throughout the company.
- Maintain overall control of the Health and Safety Program.
- Ensure all established health and safety policies are administered and enforced in all areas.
- Ensure that all field operations personnel are aware of and effectively practicing the policies and procedures set out in the health and safety program in accordance with applicable legislated standards.
- Verify that reported incidents and unsafe acts/conditions have been effectively dealt with.
- Ensure policies, practices and procedures are reviewed annually.

Supervisors/Foremen:

- Provide safe working conditions for all workers under their supervision.
- Provide workers with instruction in safe work procedures. Supervisors shall require workers to use any applicable personal protective equipment as part of their routine duties.
- Advise workers that they must report any incidents, unsafe acts or conditions to their supervisor so corrective measures can be implemented.
- Effectively deal with any incidents, unsafe acts or conditions that have been reported, or which are liable to cause or have caused incidents.
- Undertake the investigation of incidents to determine the underlying causes. Report in detail to the Superintendent and complete the required report forms on a timely basis.
- Provide a good example for workers by always directing and performing work in a safe manner.
- Conduct regular inspections for unsafe practices and conditions and ensure prompt corrective action to eliminate causes of incidents.
- Work in cooperation with other project supervisory personnel to determine safe practices, enforce their use, develop disciplinary procedures for dealing with violations and develop other general safety and incident prevention measures.
- Provide each worker with information about the hazards of his/her job and how to avoid them.
- Maintain a housekeeping standard and assign specific cleaning and organizing responsibilities to individuals.
- Enforce all established safety legislation and work methods. Take disciplinary action when necessary to ensure compliance with the rules.

Workers:

- Carry out their work in a manner that will not create a hazard to their own health and safety or the health and safety of other workers.
- Assist site supervisors to reduce and control unsafe conditions and acts on the work site.
- Report any incidents, unsafe acts or unsafe conditions immediately to their supervisor so corrective measures can be implemented.
- Report any anticipated loss of work time to their supervisor as soon as possible after being treated by a physician following injury.
- Comply with legislative requirements while carrying out their assigned duties.

Contractors:

- Follow the company contractor guidelines.
- Ensure a safe workplace.
- Ensure hazard assessments are done prior to starting work.
- Ensure compliance with Alberta OH&S Legislation.
- Follow applicable safe work practices and procedures.
- Ensure substandard acts and conditions are corrected.
- Ensure workers wear person protective equipment (PPE) appropriate for the type of work being done.
- Provide MSDS sheets for any controlled products brought to or used on site.
- Ensure all equipment brought on site is in good safe operating condition and properly maintained.

Visitors:

- Sign in and report to a company representative before accessing the work site.
- Be escorted by a company representative at all times while on the work site.
- Wear all PPE as required by the company while on the work site.
- Adhere to all directions given by the company representative.
- Immediately report any injury or illness sustained while at the work site to the company representative.
- Sign out when their work site visit is completed.



Health and Safety Manual

Hazard Assessment Policy

Hazards assessment make up the core of our health and safety program. We use them to bring attention to and address immediate and potential safety concerns on site and at the shop. They bring attention to potential hazards in our scope of work, help to prioritize the risk, and provide controls to mitigate the potential for incident.

There are two types of hazard assessments employees will use; formal hazard assessment in the form of written procedures and field level hazard assessments.

Written procedures are made for tasks of a specific priority level that we come across frequently in our scope of work. Some obvious example for us are 'proximity to live circuits' or 'working from heights'. These procedures are to be followed by employees whenever they apply to their daily work.

Field level hazard assessments are the responsibility of employees in the field. They are a direct analysis of site conditions and change regularly.

Responsibilities:

-Employees are responsible for filling out field level hazards assessments on the job; at the beginning of each day and whenever conditions change on a work site.

-Hazard assessments will be initialed by each employee that they affect and signed by a supervisor. They will then be submitted to the shop for review and filing by the safety department.

A field level hazard assessment alone does not get find or get rid of all hazards, we simply use it as a tool to remind ourselves to look for hazards and work around them.

E 1 Electrical Formal Hazard Assesment October 2017

	TASK	ACTIVITIES	HAZARDS	RANK (P/S)
1	Testing / measuring electrical properties	Opening/ closing panel doors	Arc hazard Electrical shock hazard	1/3
2	working around live equioment	adding circuits to existing panels (pulling into panels, adding breakers, tying in wires)	Arc hazard Electrical shock hazard	1/3
3	Trouble shooting live circuits	Opening equipment/ tesing and measuring	Electrical shock hazard arc hazard unintentional energization of equipment	1/3
4	Circuit energization (new construction)	Turning on breakers, testing lighting and other circuits	Exposed live circuits/danger to others unintentional energization of equipment	1/2
5	Ladders, lifts and working from heights	carrying / lifting ladders mounting / securing ladders to company vehicles setting up/climbing/working from ladders	heavy lifting loose loads, danger to public fall hazard/ dropping of tools etc	1/3
6	Hanging / mounting heavy electrical equipment	planning lifts / equipment requirements setting up lifting equipment clearing work area	heaving lifting crushing hazard comprimise of structure	1/3
7	loading / unloading trucks	loading pipe loading transformers/panels tying down loads (pickup trucks)	heavy lifting pinch points sharp edges	1/1
8	vehicles	driving refueling tying down loads (pickup trucks)	vehicular accidents / personal injuries damage to property danger to public	2/2
9	Running pipe	trench work (pvc) drilling into concrete, q-deck	pvc glue (whimis considerations) concrete and other dust power tools proper trenching?	2/1
10	pulling wire/cable	fishing pipe attachment of wire/cable physical pulling	live equipment present? unplanned separation of wires causing trips falls etc	1/1
11	miscellaneous office activities	filing paperwork use on computer typeing	improper work space ergonomics repetitive use injuries	1/1
12	installing equioment on sloped rooftops	accesing the roof working from heights loading/unloading material securing material protecting workers/public below work area	fall hazard, falling material/debris, danger to public and other trades. Possible property damage.	2/3

E 1 ELECTRICAL CRITICAL TASK LIST AND HAZARD CONTROLS October 2017

#	TASK	CONROLS IMPLEMENTED			COMMUNICATION	MONITORING	REVIEW
		ENG.	ADMIN.	PPE			
1	TESTING / MEASURING ELECTRICAL PROPERTIES	De-energization unavailable.	Live testing to be preformed by journeymen or trained and qualified apprentices only. SWP and SJP to be read and adhered to.	Safety glasses, insulated tools.	Safety meetings and toolbox talks. Employee orientation	All work involving live equipment will be monitored by the supervisor on site.	SWP and SJP reviewed yearly
2	WORKING IN LIVE ELECTRICAL EQUIPMENT	De-energize equipment whenever work is to be done in live equipment	It is company policy that no live work is done under any circumstances. Lock out tag out SWP and SJP are available	Safety glasses, Lock out tag out procedures in place	company policy communicated at employee orientation.	All work to be completed in live electrical equipment will be reviewed and approved by site supervisor.	SWP and SJP reviewed yearly
3	TROUBLE SHOOTING LIVE ELECTRICAL CIRCUITS	All trouble shooting will be preformed in the deenergized state with appropriate testing instruments.	Training to be completed by individuals who will be preforming this task. SWP and SJP are in place.	Safety glasses, insulated tools.	Safety meetings and toolbox talks. Employee orientation	Proper methodology is to be monitored by qualified person doing the work.	SWP and SJP reviewed yearly
4	HANGING / MOUNTING HEAVY ELECTRICAL EQUIPMENT	Equipment is to be hoisted into place by contractor where possible. Lifting equipment to be used when loads cannot be safely lifted by manpower.	SWP and SJP in place and to be reviewed before task takes place. All hanging apparatus is to be designed by engineering consultant and steel work done by contractor.	Steel toed boots, safety glasses, gloves.	Safety meetings and toolbox talks. Employee orientation	All lifts as specified in SWP are to be planned and executed by trained and qualified workers.	SWP and SJP reviewed yearly

5	WORKING ON SLOPED ROOFTOPS	Use of travel restraint equipment while on rooftop. Ladders to be secured to structure for access. All material to be secured to structure in the event of high winds.	SWP and SJP in place and to be reviewed before task takes place. Fall protection plan to be completed. FPP should include material handling at heights.	Harness, lanyard with rope grab, lifeline and anchor point.	Safety meetings and toolbox talks. Employee orientation.	Fall protection plan to be completed and reviewed by supervisor on site.	SWP and SJP reviewed yearly
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Health and Safety Manual

Safe Work Practices and Safe Job Procedures

Safe work practices and safe job procedures have been developed for use by employees when completing tasks that we regularly undertake in the course of our work. The tasks selected for SWPs and SJPs come from the critical task list and represent some of the more hazardous acts involved in our scope of work.

As we develop our safety program and safety manual we will expand on these ideas. Everyone is encouraged to bring constructive criticism to existing practices and procedures as well as bring forth ideas for additions to the safety manual.

These practices and procedures are to be referred to and followed whenever they come up. They can also be used as training tools to act as a guideline for training employees on new tasks.



Health and Safety Manual

Company Rules

Mandatory Requirements

1. Wear a hard hat, safety boots and safety glasses at all times in all work areas.
2. Report to your supervisor all unsafe acts, unsafe conditions and close call incidents.
3. Report all injury or damage immediately.
4. Perform all work using safe work practices and job procedures in accordance with your supervisor's direction.
5. Maintain good housekeeping in your work area.
6. Operate all vehicles and mobile equipment in accordance with site rules and applicable highway legislation.

Grounds for Dismissal

The following are prohibited at all times on all company property and all company job sites:

- Possession or consumption of alcohol or illegal drugs.
- Arriving for work or remaining at work when ability to perform the job safely is impaired.
- Possession of firearms.
- Fighting, horseplay and practical jokes.
- Theft and vandalism.
- Damaging, disabling or interfering with safety, fire-fighting or first aid equipment.
- Use of company owned vehicles for personal use without consent of management.



Health and Safety Manual

Enforcement Policy

Management is committed to achieving health and safety excellence by providing an injury and accident free workplace for its workers. All employees are required to follow applicable legislation, company rules, safe work practices and safe job procedures.

Violations will be handled in an objective but firm manner. Documentation is required at each stage of enforcement.

The steps of the enforcement progression are:

- 1. Verbal Warning**
- 2. Written Warning**
- 3. Suspension**
- 4. Dismissal**

Any measure or combination of measures deemed appropriate to the circumstance may be used at the discretion of management. Employees will review the company Enforcement Policy as part of their orientation.

- * The information in this policy does not take precedence over applicable government legislation, with which all workers should be familiar.**



Health and Safety Manual

Personal Protective Equipment Policy

It is the policy of E 1 Electrical that all employees shall use proper Personal Protective Equipment (PPE) when and where required.

- All employees, guests and visitors will wear CSA Grade 1 safety boots, long pants, minimum 4" sleeves, CSA approved hard hats and a high visibility safety vest at all times on the job site.
 - Specialty PPE required for the job site will be worn when required.
 - CSA approved safety glasses will be worn by employees whenever a risk of flying debris exists. This includes but is not limited to using tools designed for cutting or striking, all power tools, when proximity to live parts of any voltage/current rating exists, and when acts of other trades pose a risk.
 - When working around sharp objects employees will wear gloves that are adequate to the work being done.
 - Company-issued and personal PPE will be inspected at the time of issue and before each use by the worker using the PPE.
 - All PPE used shall be in good condition and maintained according to manufacturer's instructions.
 - All PPE used by employees will be within the requirements of OH&S legislation and applicable standards.
 - All PPE that has been removed from service will be tagged "**out of service.**" Any PPE that has been tagged out will not be returned to service until repaired and inspected by a qualified person. Please refer to the policy regarding removal of defective equipment in this manual.
 - The company will maintain appropriate inspection and service logs/records for specialty PPE. **Specialty PPE will be inspected prior to each use.**
 - No piece of PPE will be modified or changed contrary to its manufacturer's instructions or specifications or OH&S legislation.
 - All employees using PPE will be trained in its proper use, and qualified to use that PPE
- * **The information in this policy does not take precedence over applicable government legislation or other policies of prime contractors. It is company policy work PPE will be worn according to this safety program as well as any safety program of a prime contractor to a combination that affords the greatest degree of protection.**

Personal PPE

Personal safety equipment such as safety glasses, hard hats, high visibility clothing, gloves and safety boots are supplied and maintained by the worker. The worker will inspect these items prior to each use and replace when necessary.

- safety boots, hard hats and a high visibility vest will be worn at all times on the job site.
- safety glasses will be worn at all times on the job site
- gloves will be worn whenever working around sharp edges or with sharp tools
- hearing protection will be worn when sound levels are above safe working levels. If you have to raise your voice to be heard, you need hearing protection.

These requirements do not supersede the requirement that may be in place by a site owner or general contractor. In the case of conflicting requirements whichever provides the greatest degree of protection shall be put into place.

Specialty PPE

Fall Protection Equipment

-Fall protection equipment is to be used whenever there exists a risk of a worker falling further than 3m or if a fall from less than 3m would cause a significant potential for injury. For example, falling on protruding rebar or scattered tools/equipment.

-Fall protection equipment is to be inspected prior to each use. Equipment that is deemed not fit for use will be tagged and set aside for replacement or repair following the process listed in this safety manual.

Face shields

-face shields are specialty PPE and will be provided for by the company.

-workers will use face shields whenever there is a high potential for flying debris including but not limited to grinding and metal cutting (chop saw).



Health and Safety Manual

Preventative Maintenance Policy

It is the policy of this company to maintain all tools, vehicles and equipment in a condition that will maximize the safety of all personnel.

To accomplish this, our Preventative Maintenance Program shall include the following components:

- Adherence to applicable legislation, regulations, standards and manufacturer's specifications.
- Inspections and maintenance services will only be performed by competent personnel.
- Inspections and maintenance services will be completed as per the company's Maintenance Schedule.
- All maintenance work will be documented and retained on file.

The process for removing defective tools and equipment will be as follows;

-if a piece of equipment is found to be unfit for service after any inspection of the equipment and its parts it shall not be used by any worker.

-the defective tool or piece of equipment will be tagged with tape with the word 'defective' will be written on it along with what is broken (if known).

-the defective tool or piece of equipment will then be returned to the shop and placed on the bench, DO NOT RETURN DEFECTIVE ITEMS TO THE TOOL CRIB.

The supervisor shall be responsible for the communication and application of the program in his area of responsibility.

Employees using each tool or piece of equipment are responsible for ensuring it is in proper functioning condition; no employee shall use an unsafe piece of equipment.

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MAINTENANCE SCHEDULE

EQUIPMENT	TYPE OF INSPECTION	SCHEDULE
Company Vehicles	As per mechanic's recommendation	8000km, 6mths or as needed
Step Ladders	check feet for any worn parts, ensure steps are not bent or missing, do arms extend fully and lock in position.	before each use, whenever returned to or signed out of the shop
Extension Ladders	check for broken/bent or missing rungs, rope and pulley in working condition, rung lock and springs function normally	before each use, whenever returned to or signed out of the shop
Wire stripper	check for proper function of all on/off buttons, cords and cord ends in good condition, all guards and adjusters working	before each use, whenever returned to or signed out of the shop
Manual Benders	handles threaded into shoes, shoes not bent or cracked/broken	before each use, whenever returned to or signed out of the shop
Hand tools cable cutters, hacksaws, screw drivers knives etc	Check for edges needing sharpening, insulated handles not cracked, worn or missing	before each use, whenever returned to or signed out of the shop
Power tools		



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Health and Safety Manual

drills, hammer drills, power ko cutters, tuggers.	Check all cords and cord ends for non functioning parts, all guards and extra handles in place, triggers and on/off switches functioning properly.	before each use, whenever returned to or signed out of the shop
Safety equipment	Check for frayed webbing, missing labels. Cracked, worn or rusted buckles, clips and d rings. Webbing keepers in place.	before each use, whenever returned to or signed out of the shop
Fall protection equipment.		



Health and Safety Manual

Health and Safety Training Policy

Purpose

The purpose of this policy is to provide for general and specialized safety and related training throughout all levels of the organization.

Policy

The company will provide, and workers will participate in, all safety and related training that is necessary to minimize losses of human and physical resources of the company.

This training will include, but not be limited to:

- Health and safety orientations for newly-hired personnel
- Hazard identification and control processes
- Job-specific training
- Health and safety training for supervisors and management
- Task and trade-specific training and certification
- Specialized safety and related training
- Refresher and update training as needed

In addition, health and safety meetings involving all workers will be held every 3 months.

*** The information in this policy does not take precedence over applicable government legislation, with which all workers should be familiar.**



Health and Safety Manual

Inspection Policy

Purpose

The purpose of this policy is to control losses of human and material resources by identifying and correcting unsafe acts and conditions.

Policy

This company will maintain a comprehensive program of health and safety inspections at all facilities and job sites.

Frequency of Formal Inspections

- Office/shop – yearly
- Other worksites – monthly or as per site requirement

Responsibilities

Project managers are responsible for the overall operation of the program.

Informal or ongoing inspection on the work site are to be completed by the supervisor of the site and all workers present each day that work is being carried out. They may include hazards assessments filled out by crews, tagging and removal of defective equipment or simply reporting unsafe acts to the supervisor. The supervisor will ensure that the concerns are dealt with in an appropriate and timely manner.

Formal inspections will be completed by the supervisor of the job site and will be accompanied by a written inspection form (available in safety manual). Formal inspections for the shop and office area will be completed by office staff.

- * **The information in this policy does not take precedence over applicable government legislation, with which all workers should be familiar.**



Health and Safety Manual

Investigation and Reporting Policy

Purpose

To investigate reported incidents, near misses and unsafe conditions so that causes can be determined and corrective actions can be implemented to prevent recurrence.

Policy

Any and all unsafe conditions on the worksite are to be reported to a supervisor immediately. The following types of reported incidents shall be fully investigated:

- incidents that result in injuries requiring medical aid
- incidents that cause property damage or interrupt operations with potential loss
- incidents that have the potential to result in (1) or (2) above (near misses)

All reported incidents that fall within legislative requirements must be reported to the appropriate authority.

Responsibilities

Supervisors will address all worker concerns regarding unsafe conditions on the workplace and ensure corrective actions are carried out. When necessary a near miss report will be filled out and submitted to the General Contractor for review and correction.

1. All workers shall report all incidents and unsafe conditions as soon as possible to their immediate supervisor and assist in the investigation when requested.
2. Supervisors shall conduct initial investigations and submit their report(s) to management promptly. In the case of unsafe conditions that can be remedied immediately the supervisor will ensure corrective actions are applied.
3. Management shall determine the need for, and if necessary shall direct, detailed investigations on all incidents. They shall also determine causes and recommend corrective actions.

*** The information in this policy does not take precedence over applicable government legislation, with which all workers should be familiar.**



Health and Safety Manual

Emergency Response Policy

It is the policy of E 1 Electrical to ensure that emergency response plans are in place, and that the appropriate resources are available to handle emergency situations at the workplace.

The manager/supervisor is responsible to implement the emergency response plan, confirm that all personnel are familiar with the plan, and test the plan to assess effectiveness.

The manager/supervisor will gather pertinent emergency information such as the location of the nearest hospital, fire station, first aid station, etc. to minimize travel time to treatment for all employees.

It is company policy that all workers are to be aware of the action required in the emergency response plans, but in the event of an emergency, they should follow the instructions of the manager/supervisor.

Training in the shop ERP will take place during the orientation process for each new worker and will be reviewed with all workers annually during the yearly shop inspection review.

An emergency response plan will be in place at the shop and one will be created for each job having duration longer than 1 month. Site-specific ERP's will be reviewed at the start of a project and regularly during general safety meetings.