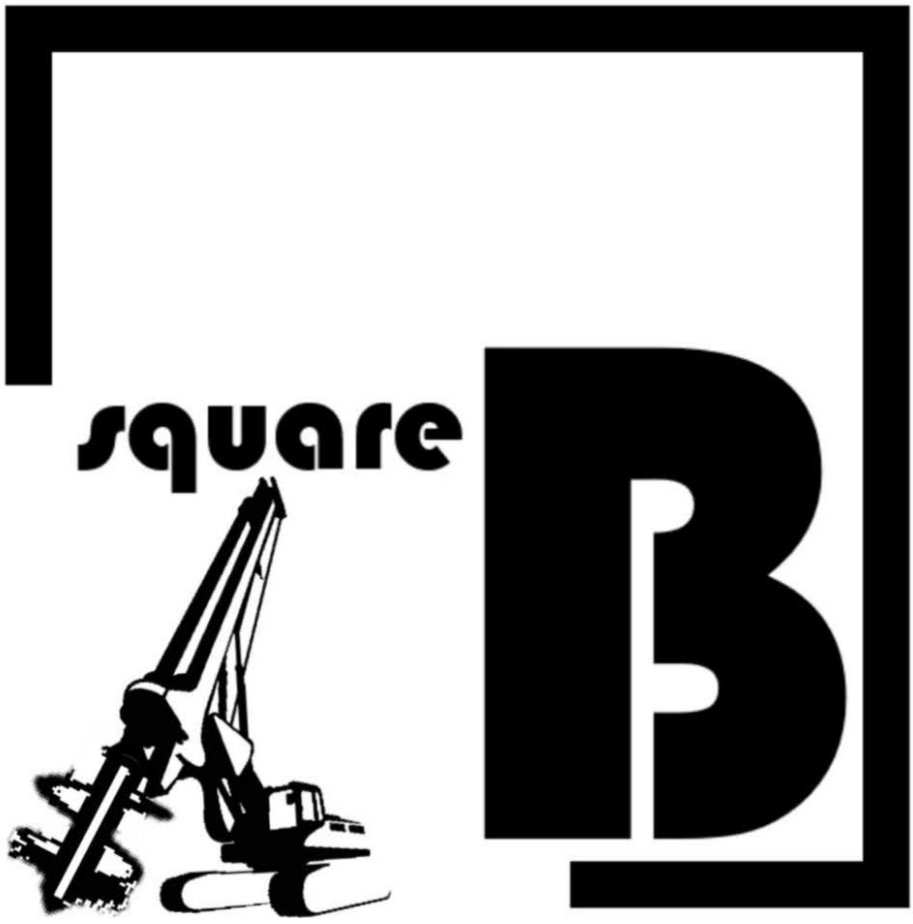


Health – Safety - Environmental Policy Manual

Health, Safety and Environmental Policy Statement

Square B, LLC's Health, Safety and Environmental program is based on the premise that Safety, Quality and Production are of equal importance. In following this philosophy, Square B, LLC is committed to achieving and sustaining HSE excellence in all phases of our projects through continuous improvement of our workplace processes.

The objective of the HSE program is to promote communication between management and workers while developing; accountability, awareness and improving skills through training and experience to eliminate injuries and illness from all operations with the overall goal of providing a safe work environment for all workers. The HSE program will meet and in some cases exceed the applicable health and safety legislation.

To be successful, all employees must have a full understanding in all safety and health related matters. Only through such a cooperative effort can a safety program for all employees be established and preserved in the team's best interests. We will include HSE in every part of our daily operations and will not allow its value to be compromised.

We recognize that the responsibilities for Health, Safety, and Environmental are shared:

- Square B, LLC accepts the responsibility for leadership of the HSE program; for its effectiveness and improvement along with providing the safeguards required to ensure safe working conditions for all employees.
- Employees are responsible for adhering to and complying with all aspects of Square B, LLC's HSE program. Employees are also encouraged to practice Employee Based Safety "EBS" while complying with all the rules and regulations of the program.

"Working safely is a condition of employment at Square B, LLC."

President Signature:		Date:	

Harassment Policy Statement

Harassment

It is the policy of Square B, LLC Communications Ltd. to prohibit any form of unlawful harassment based on race, color, sex, religion, national origin, citizenship status, age, mental or physical disability or veteran status. Additionally, the harassment policy prohibits any other form of; inappropriate conduct, comment, display, action or gesture that would result in harassment. Any behavior that insults, coerces, intimidates, or harasses another employee, visitor, vendor, customer or prospective customer will not be tolerated. The harassment policy applies to all individuals associated with Square B, LLC Communications Ltd. including employees, vendors, contractors, customers, etc. A copy of the policy shall be placed on the company bulletin board.

Behavior

It is in violation of Square B, LLC Communications Ltd. policy for any employee to engage in any act or behavior that has the intent or effect of:

a) Implicitly or explicitly affecting an employee's employment opportunities

b) Creating a hostile, intimidating or offensive work environment

c) Unreasonably affecting an employee's job performance

Harassment includes, but is not limited to:

a) Sexual, racial or any other derogatory remarks, comments, materials, pictures, etc.

b) Unwelcome verbal or physical advances

c) Offensive jokes or innuendoes

d) Behavior that is coercive, insulting or intimidating in nature

Any employees, including managers and supervisors, who violate this policy are subject to discipline, up to and including termination of employment for any act of harassment.

Harassment Reporting Process

Individuals who believe they have been treated in a harassing or discriminatory manner should immediately report the incident to their manager, executive management or to the Human Resources Department. All complaints will be promptly and thoroughly investigated and will be treated with confidentiality to the maximum extent possible. Information will only be shared on a need to know basis with other individuals. Employees are asked to refrain from discussing the matter outside of the formal investigation process.

Individuals, who witness, observe or become aware of harassment taking place and affecting another individual should immediately notify their manager, executive management or the Human Resources Department. Individuals should never assume that the company is aware of a problem.

Any manager who becomes aware of a potentially harassing situation must report the information to executive management or the Human Resources Department.

President Signature:		Date:	

Return to Work Statement

Policy

Square B, LLC Communication Ltd. (Square B, LLC) recognizes the benefits of a program that facilitates early and safe return to work for employees who have suffered an occupational injury or illness.

Square B, LLC is committed to providing its employees with a comprehensive and supportive return to work process, thus, ensuring that all employees receive the right care, at the right time, for the right outcome.
All the essential elements of a successful return to work process have been developed and put in place.

Objectives

Square B, LLC is committed to providing suitable employment that is available and consistent with the employee's functional abilities.

All efforts will be made to minimize the risk of re-injury or risk to others during this process.

The program will utilize a progressive re-entry process into a productive work environment, for employees recovering from an occupational illness or injury and as set out to be compatible with the legal requirements of the Canada Labour Code and the Provincial Workers' Compensation Boards.

Responsibilities

The responsibility for this program is outlined in the Square B, LLC HSE policy manual.

All co-workers will support the return to work program and create a supportive environment for the returned worker.

The employee shall comply with the program and participate in the return to work process.

It is an essential duty of every employee of Square B, LLC to comply and participate in this program.

President Signature:		Date:	

Violence in the Workplace Policy Statement

Violence

It is the policy of Square B, LLC Communications Ltd. to prohibit any form of violence in the workplace and Square B, LLC has put a program together for the training and recognition of the hazard.

“Violence is defined as;” the attempt or actual exercise by a person, other than the worker, of any physical force so as to cause injury to a worker, and includes any threatening statement or behavior which gives a worker reasonable cause to believe that he or she is at risk of injury.

Risk Assessment

Square B, LLC will perform a risk assessment of all work sites to inform them if there are any risk considerations to take. The risk assessment shall consider; any prior acts of violence, prior acts of violence in similar work places and any adverse site locations that may be more susceptible to violence.

Controls

If the risk assessment determines that there is a risk of violence, then administrative controls shall be put in place that includes; arrangements to eliminate the risk of violence and if the risk cannot be eliminated, then controls shall be put in place to minimize the risk.

Informing

In the risk assessment process and violence is a possibility then workers shall be informed of the nature and extent of the risk along with being informed if there is a recognized risk in the work place.

Instruction

Workers shall be instructed to recognize the potential of violence and to minimize or control the at risk behavior along with procedures for reporting, investigation and documentation.

Investigation

When Square B, LLC becomes aware of work place violence, the company shall take the necessary steps to resolve the situation. If the situation cannot be resolved a Competent Person shall be appointed to investigate the claim and make recommendations in a report.

The Competent Person report referenced above shall be passed on to the Safety Committee for adaptation and implementation of controls to prevent a reoccurrence.

Consultation

If a worker is exposed to workplace violence, then they are advised to consult a health care provider of their choice.

President Signature:		Date:	

General Safety Rule Policy

The following rules, while not all inclusive, are considered serious violations of the Square B, LLC policy manual and may be grounds for discipline, up to and including termination through Square B, LLC's disciplinary policy as outline in the acceptance page of the HSE policy. The rules listed below are pulled from the body of the document and placed here for easier identification. The list is in no particular order or ranking.

- Knowingly endangering yourself or others
- Failure to report all incidents (accidents, injuries and near misses) immediately
- Possession or use of illicit drugs or alcohol while at work or while operating a company vehicle
- Unauthorized possession of weapons while at work
- Malicious or careless destruction of property
- Fighting or horseplay
- Falsification of safety documents
- Violation of a company safety policy
- Violation of a company vehicle policy
- Failure to use adequate fall protection while working at heights
- Report fit for duty

President Signature:		Date:	

Table of Contents

1. HSE Policy Manual

1.1. Introduction

This Health, Safety and Environmental (HSE) Policy Manual (hereinafter referred to as the (HSE Manual) describes the management programs, work practices and field execution work processes that shall be required during execution of work on all Square B, LLC Communications projects. This HSE Manual is not intended to serve as the only source of Safety and Health (HSE) requirements for the project, but rather provides requirements that meet Square B, LLC's standards and serve as the foundation for federal, state and local regulatory compliance. Significant effort was made to ensure that this HSE Manual is responsive to the unique needs of the telecommunications industry.

Due to the dynamic nature of the industry, it is required and expressly understood that in conjunction with this HSE Manual, Square B, LLC shall perform adequate risk assessments to identify hazards and shall develop appropriate measures to mitigate identified hazards by; engineering out the hazard, reduce the time exposed to the hazard and the use of PPE.

The elements contained in this HSE Manual enable all employees to implement an effective HSE management system with a strong emphasis on preventing harm, managing losses, and meeting regulatory mandates. Employees agree that the responsibility for successfully implementing this HSE Program is directly related to the degree of commitment, level of effort, quality of leadership, and extent of support provided by all Square B, LLC personnel. To this end, Square B, LLC management shall ensure that each employee receives adequate training on the requirements of this HSE Manual.

Square B, LLC understands that this manual may not cover every situation that occurs in our day to day operations and as a result reserves the right to make changes and deletions to this document when such action is deemed necessary.

This HSE Manual shall be distributed and reviewed by all employees.

1.2. HSE Policy

1.2.1. Purpose

The purpose of this manual is to clearly describe the rules and regulations that are pertinent to our industry and the responsibilities that go along with following this manual. The policy in section 1.2 of this document shall cover all other sections in the manual in relation to policy.

1.2.2. Policy

Square B, LLC is dedicated through this manual to clearly define compliance through education and training.

1.2.3. Responsibility

It is the responsibility of Management to ensure that all employees that fall under their care understand and follow this manual.

1.2.4. Labor Code

The rules and regulations in this HSE manual will not take precedence over the latest revision of the OSHA regulations.

1.2.5. Contractual Obligation

There will be times when the contractual obligation to our customers may exceed the current Square B, LLC HSE policy manual; when that occurs the customer policy will prevail.

1.2.6. Program Review

The program shall be reviewed when there are changes to regulations of company policies and at a minimum yearly.

2. HSE Behaviors, Leadership and Responsibilities

2.1. Leadership and Goals for Safety

The **Management Team** is committed to ensuring:

a) Safe and efficient work execution,

b) The safety and welfare of our employees, the public, and the communities in which we work.

The **Management Team** further pledges to fulfill this commitment by striving to achieve the following elements:

a) Demonstrated management commitment and leadership,

b) Employee commitment and participation,

c) The belief that all incidents are preventable,

Square B, LLC employees commit to these elements in the implementation of all project activities—from the selection of subcontractors, to the careful planning of work execution, through the vigilant supervision of each work task. Furthermore, in the endeavor to continually improve and achieve the highest level of performance, management/consultants shall measure HSE performance through regular field inspections, audits/assessments, and evaluation of compliance with the requirements of this HSE Program.

2.2. Safe Working Environment

Square B, LLC shall strive to provide a safe working environment by encouraging two-way communication between management and employees and by facilitating an atmosphere of trust by listening to employee suggestions and complaints and taking positive steps without reprisals. A clean and secure working environment can result in a safe working environment. Management recognizes that employee behavior alone cannot guarantee a safe environment. Square B, LLC shall strive to provide a workplace free from recognized hazards and at-risk behaviors. Square B, LLC believes that all employees have the right to work in areas that are free from recognizable hazards.

2.3. Leadership Behaviors

Square B, LLC shall take a proactive approach to injury prevention that focuses on reducing at-risk behaviors that can lead to injuries and increasing safe behaviors that can contribute to injury prevention. Square B, LLC shall encourage managers to be responsible for creating an incident prevention process by their leadership behaviors.

Square B, LLC understands that an analysis of the injuries occurring in the construction industry indicates that more than 90% of these injuries are caused by employee at-risk behaviors (unsafe acts). Square B, LLC shall focus on the at-risk behaviors to assist employees and supervisors to manage these behaviors, with the goal of achieving zero incidents.

Proactive HSE leadership behaviors demonstrated daily by managers and supervisors are critical to the successful implementation of this HSE Program.

2.4. General Goals

Square B, LLC shall focus on behaviors by ensuring that all employees:

a) Make the connection between at-risk behaviors and zero incidents philosophy,

b) Identify and reinforce safe behaviors,

c) Remove obstacles that prevent safe behaviors, (listen to employee concerns and fix them)

d) Increase employee involvement through listening, responding, and reinforcing behaviors through the Safety Committee.

2.5. Employee Goals

Employees shall focus on the following safe behaviors:

a) Wearing PPE: hard hats, glasses, gloves, and fall protection whenever required,

b) Maintain and inspect PPE daily,

c) Not exposing themselves to recognizable hazards,

d) Be conscious of malicious or careless behavior that would result in the destruction of company property.

2.6. Responsibilities, Roles, Authority and Accountability for HSE Program

While each one of us has a responsibility for safety, those responsibilities change with each level in the organization. This component of our HSE Program outlines those responsibilities, accountabilities, and authority. Everyone has the right to a safe and healthy workplace.

All safety forms are legal documents and shall be processed with diligence and never falsified.

"EVERYONE AT SQUARE B, LLC HAS A RESPONSIBILITY FOR SAFETY"

2.6.1. Employer/President/Vice Presidents/Managers (Management)

Square B, LLC's management is responsible to develop programs that provide quality HSE advice and support to field operations. Square B, LLC's organization shall adequately manage the program and issues affecting the welfare of our employees and the communities in which Square B, LLC works.

Management has significant responsibility to ensure the safety of all workers under their control and direction. They will do everything reasonable to ensure a safe work place, including:

a) Ensure that HSE policies and procedures outlined in this HSE Program are communicated, enforced, and reinforced through continuous communications.

b) Develop, maintain and change the HSE program when necessary.

c) Ensure that acceptable HSE conditions are maintained throughout the project and comply with all applicable regulatory requirements.

d) Management shall implement the necessary measures to ensure its employees are qualified to perform assigned work and are fully trained in the necessary safety and health provisions appropriate to their work.

e) Ensure that adequate resources are allocated to fully implement this HSE Program.

f) Conduct risk assessments, hazard identification, develop appropriate measures to reduce hazards and safeguard employees prior to starting work.

g) Ensure there is a safe means of entrance and exit from all worksites or work related areas.

h) Establish control measures to eliminate, isolate, or minimize exposure of all employees to hazards.

i) Conducting regular inspections of the work areas, identifying hazards or areas of environmental non-compliance, and taking the appropriate corrective action.

j) Ensuring that safety is integrated into the work plan prior to starting any work activity.

k) Ensuring that tools and equipment are checked before they are issued or utilized and they are free of defects and carry current certifications, as required.

l) Ensure that potable water is available at all locations.

m) Ensure the necessary resources and equipment is available for each job.

n) Ensure employees and subcontractors know when our HSE program is exceeded by contract and what those rules are before work starts. If there is specific language regarding drug and alcohol not included in this HSE manual, then those differences shall be addressed.

o) To monitor departments, projects and direct reports and hold them accountable for their individual safety performance.

p) To provide information, instruction and assistance to all supervisory staff in order to protect the health and safety of all our employees.

q) To understand and enforce our accident prevention policy as well as the occupational health and safety regulations.

r) To provide all supervisory staff with training in our HSE Program as well as the relevant occupational safety and health regulations and all company policies and procedures.

s) To provide all supervisory staff with proper, well maintained tools and equipment, plus any special personal protective equipment that may be required.

t) To provide ongoing safety training and education programs as required.

u) Shall provide communication to the public and news media if an emergency occurs.

v) After an emergency process is complete, the response plan and process shall be reviewed to ensure the plan works efficiently.

w) Shall ensure all employees have easy access to the HSE policy manual and the OSHA regulations.

x) Ensure there is a Competent Person on site at all times to assist in recognizing hazards but more important, one who has the authority to mitigate or eliminate the hazard.

2.6.2. Supervisors/Foremen

Those of you who are appointed as supervisors/foremen have a very important role to play in ensuring our workers are safe. You have the authority to correct unsafe conditions and practices and to ensure work is done safely. Square B, LLC will hold you accountable for your actions and a supervisor must:

a) Know and apply the companies' HSE policy and relevant occupational health and safety regulations.

b) Ensure that all employees are trained to work in a safe manner and that they are provided with and use all protective measures and procedures required by the company and by regulation to ensure their health and safety.

c) Complete a Daily Job Hazard Assessment (DJHA) to advise all employees of any potential or actual dangers and how to isolate, prevent or remove them.

d) Arrange for first aid or medical treatment as required, in the case of injury or illness including transportation to a doctor or hospital as necessary.

e) Report all accidents/incidents to the office immediately and assist in the investigation of all accidents with the goal of preventing similar accidents in the future.

f) Carry out regular inspections of the work place to ensure a safe and healthy environment.

g) Provide a method and means for control and care of personal protective equipment.

h) Ensure that all company requirements are met, such as personnel protective equipment, safety inspections.

i) Ensure the workplace is safe from recognizable hazards.

j) Know their crew and ensure they are physically and mentally able to complete their tasks each day.

k) Equip and instruct workers in use of Personal Protective Equipment (PPE).

l) Ensure all rules and safe work practices are communicated to workers and that they understand them and follow them.

m) Monitor the work as it progresses to ensure it is safe.

n) Take immediate corrective action when it is recognized that workers are in unsafe situations.

o) Instruct workers how to do the job safely.

p) Conduct formal and informal inspections of the work.

q) Set a prime example of safe behavior.

r) Cooperate with other work crews on a project.

2.6.3. Workers

Workers are responsible for their own safety, their actions and the actions of others on the site. Each person will be held accountable for his actions and workers must:

a) Adhere to the HSE manual, **as a condition of employment** with Square B, LLC.

b) Use such safety materials, protective equipment, devices and clothing as they are designed for the applicable work. Follow all prescribed procedures with respect to safety and health.

c) Take all reasonable and necessary precautions to ensure their own safety, and the safety of their fellow employees, and any person likely to be affected by their acts.

d) Comply with all instructions from Supervisors concerning safety and health.

e) Report to their Supervisor anything or circumstance in a work place that is likely to be hazardous to them, their fellow employees or other persons granted access to the work place.

f) Report every accident or other occurrence arising in the course of, or in connection with their work that has caused a near miss or injury to them or their fellow employees on the same day as the incident.

g) Work safely at all times.

h) Address all hazards as you see them and ones that cannot be repaired shall be reported to your supervisor.

i) Be fully ready for each day of work.

j) Cooperate with other workers on the site.

k) Set a good example for others.

l) Take training that will help do their job safer and more efficient.

m) Recommend safer or more efficient ways to do the work.

n) There will be no horse play while on the job.

Employees shall be subject to disciplinary action up to and including termination of employment for violations of Company HSE policies, practices, procedures, or regulations.

2.6.4. Sub-Contractors

By definition a sub-contractor is an independent contractor hired for their expertise and is not an employee of Square B, LLC and at a minimum is responsible:

a) To comply with the applicable OSHA regulations.

b) To comply with the Square B, LLC HSE policy manual and any additional rules and regulations referenced by the client that may not be covered by the Square B, LLC HSE manual including the clients drug and alcohol program.

c) To carry their own workers compensation as mandated by provincial law and as specified by our subcontractor agreement along with an accident experience rating.

d) Square B, LLC shall ensure all contractors have a program in place to investigate their accidents and a process to contact and inform Square B, LLC of the results.

e) To carry the applicable auto insurance as specified by our subcontractor agreement.

f) To carry commercial general liability insurance as specified by our subcontractor agreement.

2.6.4.1. Responsibilities for Subcontracting

a) Management shall ensure there is a program in place for subcontracting.

b) Management shall ensure subcontractors understand their responsibilities and are qualified to complete those tasks.

c) Our Supervisors and employees working with our subcontractors on site are responsible for including them in our job hazard analysis and to ensure they follow our HSE policy manual.

3. Training and Education

Square B, LLC is committed to ensuring that employees are properly trained for their assigned work activities. All training and education shall be documented and shall include; subject, date, time, and names of trainees. Instructors conducting training shall be authorized and shall be qualified by experience and/or education.

Square B, LLC will provide and ensure that all employees participate in the following training programs:

a) Safety orientations for all new hires.

b) Job specific training as required.

c) Training and/or education will be documented and,

d) Instructors shall be qualified and authorized.

3.1. Responsibilities

Management is responsible for the overall operation of the program.

Project Managers and Superintendents are responsible for ensuring the crews are available for training and have the training to complete their tasks.

Supervisors are responsible for ensuring the employees understand and are trained to complete their tasks.

Workers are responsible for ensuring they understand their tasks and are able to complete those tasks.

The policies in this manual are not intended to and will never supersede the OSHA regulations that apply.

3.2. Employee HSE Orientation

All Square B, LLC employees shall go through an HSE orientation, write an exam and have that exam reviewed for 100 percent understanding. This orientation shall provide employees with the general knowledge of the health, safety and environmental hazards associated with those tasks, and the appropriate measures to be taken to mitigate those hazards.

3.3. Specialty and/or Regulatory HSE Training

Square B, LLC is committed to ensure that employees performing hazardous or unfamiliar tasks and those tasks where training is required by regulation are appropriately trained and receive instruction applicable to those tasks.

Training required for the performance of hazardous or unfamiliar tasks and regulatory-mandated training shall be completed before an employee performs such work tasks. Regulatory training may include topics such as; hazard awareness, respiratory protection, confined space entry, excavation safety, scaffold user training, fall protection, fall protection rescue, CPR first Aid, electrical safety awareness and safe rigging practices, hoist operation, capstan hoist, ladders, etcetera.

3.4. Non-English Speaking Employees

It is the responsibility of Square B, LLC to ensure that HSE training and instructions are provided in the language spoken by non-English speaking employees to ensure comprehension.

3.5. New Employees

Square B, LLC management will ensure all new employees with no previous experience in the industry never work alone and always work with a Competent Person for the first three months.

a) When a new employee is assigned to a crew, management will communicate to the Supervisor, the workers experience.

b) The first step in monitoring a new employee is ensuring they understand and apply the HSE policy manual.

c) Once the new employee demonstrates an understanding of the HSE policy manual the fellow crew members may pay less attention to his daily efforts.

4. General HSE Programs

4.1. Fit for Work

The purpose of this component is to ensure our work places are safe by having a crew that is fully prepared for a full day's work. This is of extreme importance to us, for the safety of all our workers, our customers and the general public. The reputation of Square B, LLC and you as a person could also be at risk. There can be no disregard of these issues.

If you are unable to perform your work for any reason, you are to notify your supervisor immediately. Supervisors will deal with these issues promptly. There can be no compromise of anyone's safety.

4.1.1. Medical Conditions

There are some medical conditions that may affect the way you work. If you are aware of any conditions that could affect your safety or that of others around you, notify your supervisor.

4.1.2. Fatigue Management

There are many factors that must be considered while managing worker fatigue. The responsibility to manage the process must be shared between management and the worker. Worker fatigue is a complex problem because its effects are caused as much from after work activities as at work duties. All employees must be trained to manage worker fatigue and to recognize fatigue when it occurs. The following points can be used as a risk assessment and to help manage the process.

a) Most adults need seven to eight hours of continuous sleep every day on a regular schedule.

b) All workers should be able to recognize fatigue in fellow workers by watching for;
   i. Long eye blinks,
   ii. Repeated yawning,
   iii. Frequent blinking,
   iv. Bloodshot eyes,
   v. Poor reaction time,
   vi. Slow speech
   vii. Loss of energy and
   viii. Inability to pay attention.

c) Each worker has a different tolerance to fatigue and each individual is responsible for recognizing their own fatigue.

d) Being in good physical condition and prepared to work is an important factor in resisting fatigue.

e) Understand the effects of; medical conditions, alcohol, drugs and sleep disorders and how they promote fatigue.

f) If a worker believes they are fatigued then they must report their condition to their Supervisor or management.

g) Understand that extreme heat or cold will add stress to the system and managing the time exposed to these elements is important.

h) Management and the crew must avoid excessive back to back long hour work days; break the cycle with a short day or a day off.

i) In situations where fatigue may be more prevalent; long hours, temperature, extreme physical exertion, etc. workers shall take the appropriate breaks.

j) In a twenty four hour period, workers are responsible for ensuring they get adequate rest during their off hours from work.

k) Complete critical or difficult tasks when workers are the most alert.

l) When managing schedules try to stay consistent and not go back and forth between the day and night shifts.

m) Operators should never operate vehicles or equipment if they are fatigued or not up to the task.

4.1.3. Personal Problems

From time to time people may encounter personal problems. These can range from marital issues to financial difficulties to concerns with your children. These issues can cause a distraction for you during the workday; you must have your mind on the job at all times. If you are experiencing any personal difficulties, speak with your supervisor.

4.2. Work Refusal

If a work refusal situation occurs the following steps shall be followed.

a) An employee has the right to refuse work for the following conditions:
   i) If while at work an employee has reasonable cause to believe that the use or operation of a machine constitutes a danger to themselves or their fellow workers, or
   ii) a condition exists that constitutes a danger,
b) Upon refusal of work, the employee shall immediately report the circumstances of the issue to their Supervisor. The Supervisor shall stop all work related to the task and make sure no one completes the task under dispute. The supervisor shall investigate and take the necessary steps to eliminate the situation.
c) In the event the Supervisor cannot correct or eliminate the situation, the office shall be notified and the situation investigated and resolved.
d) The employee shall not be disciplined for such a work refusal.

4.3. Disciplinary Action

Any violation of this HSE policy may subject an employee to disciplinary action including; verbal warning, written warning, suspension without pay and dismissal.

4.4. Drug and Alcohol

Square B, LLC has a Drug and Alcohol policy covered in a separate manual that promotes a safe and healthy work environment.

4.4.1. Purpose

To provide a safe, healthy and productive work environment, and to maintain the public's trust and confidence in the Company and its product. We recognize that the use of illicit drugs and the inappropriate use of alcohol and medications can adversely affect job performance, productivity, the work environment and the wellbeing of employees. It can also place the integrity and safety of company property and operations at risk.

4.4.2. Guidelines

All employees are expected to perform their job in a safe manner and in all ways consistent with established company practices. At no time, will workers remain on site if they are under the influence of alcohol, drugs or any other substance that may affect their performance and the safety of coworkers around them.
In addition, it is expected that everyone will:

a) Read and understand the policy and their responsibilities under it,
b) Report fit for duty for any and all scheduled duty and remain fit for duty while on company business, premises, and worksites,
c) Seek advice and follow appropriate treatment if they have a current or emerging problem, and follow recommended monitoring programs after attending treatment,
d) Co-operate with any work modification related to safety concerns,
e) Intervene as appropriate to encourage a co-worker to access assistance before an alcohol or drug problem impacts performance or safety, and
f) Co-operate with an investigation into a violation of this policy, including any request to participate in the testing program as and when required to do so under this policy.

4.4.3. Responsibilities

Management is responsible for the overall operation of the program.

The Project Managers and Supervisors will ensure all employees and subcontractors are aware of the program and their guidelines.

The Supervisors are responsible for ensuring the employees under their control; comply with the rules and regulations.

The Workers are responsible for complying with rules and regulations and reporting any discrepancies to their Supervisor.

4.5. Smoking

To protect and enhance our indoor air quality and to contribute to the health and well-being of all employees, Square B, LLC Communications shall be entirely smoke free. Square B, LLC shall comply with the following regulations.

a) All federal and state regulations shall be followed.

b) Each office shall inform employees and members of the public of the smoking prohibition and of the location of the designated smoking area.

c) Employees who choose to use these smoking areas do so at their own risk.

d) Smokers and users of tobacco products must dispose of the remains in the proper containers. This helps to keep a neat and clean environment for all employees and our visiting partners and customers.

4.6. Harassment

It is the policy of Square B, LLC to prohibit any form of unlawful harassment based on race, color, sex, religion, national origin, citizenship status, age, mental or physical disability or veteran status. Additionally, the harassment policy prohibits any other form of harassment even if it is not technically unlawful. Any behavior that insults, coerces, intimidates, or harasses another employee, visitor, vendor, customer or prospective customer will not be tolerated. The harassment policy applies to all individuals associated with Square B, LLC including employees, vendors, contractors, customers, etc.

4.6.1. Behavior

It is in violation of Square B, LLC policy for any employee to engage in any act or behavior that has the intent or effect of:

d) Implicitly or explicitly affecting an employee's employment opportunities

e) Creating a hostile, intimidating or offensive work environment

f) Unreasonably affecting an employee's job performance

4.6.1.1. Harassment includes, but is not limited to:

e) Sexual, racial or any other derogatory remarks, comments, materials, pictures, etc.

f) Unwelcome verbal or physical advances

g) Offensive jokes or innuendoes

h) Behavior that is coercive, insulting or intimidating in nature

Any employees, including managers and supervisors, who violate this policy are subject to discipline, up to and including termination of employment for any act of harassment.

4.6.2. Harassment Reporting Process

Individuals who believe they have been treated in a harassing or discriminatory manner should immediately report the incident to their manager, executive management or to the Human Resources Department. All complaints will be promptly and thoroughly investigated and will be treated with confidentiality to the maximum extent possible. Information will only be shared on a need to know basis with other individuals. Employees are asked to refrain from discussing the matter outside of the formal investigation process.

Individuals, who witness, observe or become aware of harassment taking place and affecting another individual should immediately notify their manager. Individuals should never assume that the company is aware of a problem.

Any manager who becomes aware of a potentially harassing situation must report the information to executive management.

4.7. Violence in the Work Place

The potential for violence in the workplace can be a hazard to any Square B, LLC worker and "Violence is defined as;" the attempt or actual exercise by a person, other than the worker, of any physical force so as to cause injury to a worker, and includes any threatening statement or behavior which gives a worker reasonable cause to believe that he or she is at risk of injury.

4.7.1. Risk Assessment

Square B, LLC will perform a risk assessment of all work sites to inform them if there are any risk considerations to take. The risk assessment shall consider:

a) Any prior acts of violence.

b) Any prior acts of violence in similar work places.

c) Any adverse site locations that may be more susceptible to violence.

4.7.2. Controls

If the risk assessment determines that there is a risk of violence, then administrative controls shall be put in place that includes:

a) Arrangements to eliminate the risk of violence.

b) If risk cannot be eliminated, then controls shall be put in place to minimize the risk.

4.7.3. Informing

In the risk assessment process and violence is a possibility then workers shall be informed of:

a) The nature and extent of the risk.

b) Workers shall be informed if there is a recognized risk in the work place.

4.7.4. Instruction

Workers shall be instructed to:

a) Recognize the potential of violence.

b) To minimize and control at risk behavior.

c) Procedures for reporting, investigation and documentation.

4.7.5. Investigation

When Square B, LLC becomes aware of work place violence, the company shall take the necessary steps to resolve the situation.

4.7.6. Consultation

If a worker is exposed to workplace violence, then they are advised to consult a health care provider of their choice.

4.8. Record Keeping Requirements

Square B, LLC shall:

a) Maintain records of all employees training,

b) Maintain copies on file of all HSE forms or statements required by Square B, LLC to be filled out before or during work such as JHA's, etc.

c) Maintain a Recordable Injury and Illness Log for the company, as well as copies of reports on all incidents.

4.9. Emergency Preparedness

a) Square B, LLC has a policy to ensure that all employees understand their responsibilities and are able to fulfill their duties in an emergency situation. Emergency preparedness is specific to each work site and shall be covered on the JHA.

b) Each work site shall have a minimum of one 5 pound ABC fire extinguisher and one standard first aid kit. If a permanent building is your work site, then it will have the appropriate number, size and type of fire extinguishers in the appropriate locations.

c) At all applicable Square B, LLC locations, emergency drills shall be conducted at a minimum of once a year or when there are major changes to operations or equipment. These drills will include instruction on the location of emergency equipment, fire prevention and emergency evacuation.

d) A formal review of the emergency response plan must be performed after an emergency has been completed.

4.9.1. Emergency Data Form

Each job site shall ensure all workers have the knowledge and access to the information which shall at a minimum include the following:

a) Site name,

b) Ambulance phone number, (a actual number is preferred, not 911)

c) Police phone number,

d) Fire Department phone number,

e) Office phone number and

f) Directions to and from the nearest EMS service, to the site.

4.10. First Aid and CPR

All employees shall be familiar with the Square B, LLC accident reporting process along with the Back to Work program to ensure all accidents are handle and reported properly.

a) The appropriate number of individuals who have valid certification in first aid training to meet the legislated requirements shall be available at the work site to render first aid at all times.

   i. Square B, LLC shall ensure there is a minimum of one first aid attendant per work site.

b) First aid kits and supplies of the appropriate size and content shall be available at each work site.

c) Square B, LLC supplied fire extinguishers and first aid kits and other supplies shall be available at each work site at no cost to the employees.

d) On site workers shall never be left on site without transportation, first aid kit, fire extinguisher and a means of communication.

e) Provisions shall be made prior to the commencement of a project for prompt medical attention in case of serious injury.

f) Proper communication system for contacting the necessary emergency service shall be on site at all times.

g) All human blood should be presumed infectious and the proper steps like gloves shall be taken to contain the fluids. Wash after removing your gloves.

h) First Aid requirements shall be reviewed annually or as required to compensate for changes in the work place.

i) When working in a remote location where EMS is not readily available, there shall be a plan in place to compensate for the remoteness. This plan must include:
   i. A first aider will accompany the injured party to the medical facility.
   ii. If the work site is twenty minutes or less from the medical facilities then a “Basic First Aid” attendant is necessary.
   iii. If the work site is twenty minutes or more and less than two hours then a “Standard First Aid” attendant is necessary.
   iv. If a work area is more than two hours from a medical facility than a “Wilderness First Aid” attendant is necessary.

j) In cases where an injury is beyond standard first aid, then there shall be a means of contacting Emergency Medical Services or transportation shall be provided by Square B, LLC.

k) First aid kits shall be inspected monthly to ensure the kit stays well stocked.

l) There shall be an applicable first aid kit in all motor vehicles, if the mode of transportation changes to; for example a quad or a snowmobile the first aid kit shall also be transferred.

m) The first aid kit and fire extinguisher location in a motor vehicle shall be clearly marked and visible from the outside.

4.10.1. Multi-Employer Sites

At locations where there are multiple employers on site; there shall be an agreement in writing to provide the following; first aid attendants, supplies, equipment, facilities, and transportation for injured workers.

4.11. Working Alone

In reference to injury, ill health or any emergency, Square B, LLC shall ensure that before any worker is assigned to a work site where assistance is not readily available a plan shall be in place to address the hazards. All employees involved in the process shall receive training to ensure they understand how the plan is implemented.

4.11.1. Working Alone at Elevations

No worker shall work aloft alone unless there is a rescue plan in place that includes another rescue person on site that is qualified to perform a rescue or a written plan in place that would provide for the prompt rescue of that person.

4.12. Employment of Young Workers

Square B, LLC shall ensure that employees are of the proper age to work based on the hazards as outlined in this section and at a minimum shall not exceed the applicable labor code.

4.12.1. Employees Under the Age of Sixteen

No employee under the age of sixteen shall work on a construction site or in the manufacturing facilities.

4.12.2. Employees Under the Age of Eighteen

No employee under the age of eighteen shall be exposed to a high risk job such as; climbing towers or any activity which would require an atmosphere-supplying respirator.

4.13. Environmental Policy

4.13.1. Policy

Square B, LLC is committed to managing environmental matters as an integral part of our business planning and decision making, along with providing a clean, healthy and sustainable environment for all employees. To obtain our policy goals, we will adhere to the following principles.

a) Ensure that all applicable environmental regulations and compliance requirements are met.

b) Manage our operations to promote environmental protection.

c) Provide education and increased awareness to employees in regards to environmental regulations.

d) Promote a workplace where we will strive to be a leader in improving environmental quality by minimizing waste and emissions, reusing and recycling, reducing the use of natural resources, and promoting pollution prevention efforts throughout our business process.

e) We shall strive to minimize releases to the air, land, or water through use of cleaner technologies and the safer use of chemicals.

f) We shall minimize the amount and toxic waste generated and shall ensure the safe treatment and disposal of waste.

g) In treating our environment we shall manage our natural resources, such as water, energy, land, habitats and scenic values in an environmentally sensitive manner.

h) We shall share information on our commitment to environmental performance improvement to our employees, vendors, and customers along with our vendors.

i) We will measure our progress as best we can by meeting annually to report and discuss our progress

4.13.2. Environmental Spill Preparedness

Square B, LLC does not work with toxic material and any material that would be spilled would be easily handled which would not require special training. A spill is defined as the accidental discharge of solids, liquids or gases that are potentially harmful to the environment. Typically, these are hydrocarbons and include fuels, oils, solvents, lubricants, etc. involving motorized vehicles, mechanical equipment or containers present at the work site. It also applies to fire, explosions, odors, paint, acids, pesticides, gases, other chemical products and contaminated water coming from the worksite.

In the event of an incident, the health and safety of people is the most important consideration and takes precedence over all other considerations. If a spill or release occurs during the course of a task being performed the first step is to identify the source and the controls needed to contain the spill, then a plan put in place following the general format below.

a) In general Square B, LLC vehicles are not required to carry release response kits unless they are going to a work site where they know there may be problems

b) All workers are to contact their onsite Supervisor immediately upon noticing a spill

c) The Supervisor will stop work and shut down the equipment

d) If the spill creates a health risk to workers, then those workers shall be removed from the site

e) The supervisor shall Immediately notify the managing office

f) Coordination of the spill will be handled from the managing office

g) The managing office will contact the local “Environmental Service Response Centre” and pass on the appropriate information

h) Activate the emergency response plan

   i. Get the MSDS sheet for the product and review the hazards and the disposal requirements

   ii. Ensure all workers that are part of the plan understand what their duties are

   iii. If there is a danger of the material getting into flowing water, make every effort to prevent that from happening

   iv. If the public is in danger then the proper steps through the local establishment must be taken to warn the public of the hazard

   v. Create a temporary berm around the spill to contain the flow to other areas

   vi. If you have plastic on site use that in conjunction with your berm

i) After containment is achieved, put a plan together for the final cleanup

5. Incident/Accident Management

5.1. Policy

All incidents shall be investigated to determined cause, with a hazardous occurrence report filled out and distributed to the appropriate parties.

At Square B, LLC, the following types of incidents shall be fully investigated with documentation:

a) Incidents that result in injuries requiring a doctor's visit or prescribed medicine,

b) Incidents that cause property damage or interrupt operation with potential loss,

c) All vehicle accidents,

d) All incidents that, by legislation, must be reported to OSHA.

e) All near misses where an accident could have occurred.

5.2. Assessments

Square B, LLC supervisors shall immediately assess each incident for the following:

a) Scope of the incident—injury to personnel, damage to property, service interruption, near miss.

b) Severity of the incident.

c) Community impacts—public/environmental impact, traffic flow/routes, property damage.

d) Determine facts; who, what, when and where.

5.3. Responsibilities

Square B, LLC supervisors shall manage each incident according to its severity:

a) Render aid to the appropriate level,

b) Contact appropriate emergency response personnel,

c) Initiate safety procedures to ensure employees and public are safe,

d) Initiate measures to immediately mitigate environmental impacts,

e) Secure the scene,

f) Preserve evidence.

5.4. Notification

Square B, LLC supervisors shall:

a) Ensure that all employees immediately report the incident to his/her supervisor,

b) Notify utilities and appropriate regulatory authorities as required,

c) Call Square B, LLC's management within the first 30 minutes of an incident.

5.5. Incident/Accident Investigation

The purpose of a documented accident investigation is to establish all root causes and contributing factors so the appropriate corrective action can be taken to prevent a reoccurrence.

a) Victim shall:

   i. Report the incident immediately to your coworkers and the supervisor.

   ii. Support and/or cooperate with any Square B, LLC investigation of any incident, injury, or near miss.

b) Supervisors shall:
   i. Investigate each incident,
   ii. Take photographs of the incident site (digital photos are preferred for ease of communication),
   iii. Conduct and document interviews. Document the investigation by completing the Incident Investigation Report,
   iv. Support and/or cooperate with any Square B, LLC investigation of any incident, injury, or near miss,

c) Management shall:
   i. Ensure a complete investigation is completed.
   ii. If any immediate changes need to be made to correct a hazard made evident by the incident, make those changes and make it part of the report.
   iii. The final investigation report shall be reviewed by management and the information shared with all employees..

5.6. Employee Accidents

All employee accidents or illness shall be reported with the following procedure and the various responsibilities as outlined in this section. This process shall be posted or readily available.

a) Whenever there is an accident or incident that results in personal injury or property damage, the accident or incident must be recorded and reported to your supervisor as soon as possible.

In regards to minor accidents and to ensure our "Return to Work Program" functions properly, all injured employees will report the incident to their Supervisor before going to the doctor.

b) The Supervisor shall phone their office as soon as possible to alert them an accident has occurred, no matter how minor the incident is.

c) Management shall work with the Supervisor to complete an initial investigation as soon as possible. (Within the same day).

d) With the appropriate reports Management shall forwarded the applicable reports to their workers compensation affiliate.

e) All accidents and incidents are to be documented and kept on file.

f) In the event of a fatality or serious injury;
   i. Supervisors shll notify the accident to their office **within a maximum of 1 hour, preferably immediately.**
   ii. Management will contact the applicable OSHA office within the reporting time frame depending on whether it is a state or federal reporting requirement, usually a maximum of 24 hours.

5.7. Records

All injuries are recorded promptly, documented on a yearly basis and archived according to company archiving policies.

5.8. Back to Work Program

Square B, LLC recognizes the benefits of a program that facilitates early and safe return to work for employees who have suffered an occupational injury or illness and will strive to manage each workers compensation claim with the goal of getting the employee back to work as soon as medically possible.

All employees that are injured on the job must participate in the back to work program as a condition of employment.

5.8.1. Policy

Square B, LLC is committed to providing its employees with a comprehensive and supportive return to work process, thus, ensuring that all employees receive the right care, at the right time, for the right outcome. All the essential elements of a successful return to work process have been developed and put in place.

5.8.2. Worker Confidentiality

When a worker is injured the details of the injury are covered by Doctor / Patient confidentiality laws and must remain private. Square B, LLC management receives the applicable information through the Functional Abilities Form (FAF) supplied to each injured worker.

5.8.3. Objectives

Square B, LLC supports an integrated systematic process of returning the employee to functioning lifestyles following a Workers' Compensation injury.

Square B, LLC is committed to providing suitable employment that is available and consistent with the employee's functional abilities.

While the alternate duties may vary from office to office and dependent on the type of injury, the general tasks should be similar.

All efforts will be made to minimize the risk of re-injury or risk to others during this process.

The program will utilize a progressive re-entry process into a productive work environment, for employees recovering from an occupational illness or injury and as set out by the applicable workers compensation board.

5.8.4. Responsibilities

Management is responsible for the overall program.

Management and Supervisors will ensure all employees are aware of the program and assist in the process of getting the employees back to work.

The Supervisors shall investigate each incident and assist management in getting the employee back to work.

All co-workers will support the return to work program and create a supportive environment for the returned worker.

The employee shall comply with the program and participate in the return to work process.

5.9. Automobile Accidents

a) **NOTE:** Make sure all Company vehicles have the proper paper work in the glove box; registration, insurance information and accident report documents.

b) When involved in a vehicle accident, **stop at once!** If a vehicle or other property is damaged and the owner is not present, attempt to locate such owner and inform them of the accident and identify yourself. If the owner cannot be located, leave a notice with your name, phone number and address in a conspicuous place on or in the damaged property and report the accident to the law enforcement agency having jurisdiction immediately. Ensure you notify your office as soon as possible, a maximum of 8 hours.

c) Obtain pertinent information from the driver of each vehicle involved, name, driver's license number, address, phone, and insurance company name. Do the same with any witness.

d) Obtain all data from the registration certificate of each vehicle involved. Be sure to include registered owner, license number, make, model, type and year. All of this data will go on the initial accident form.

e) Identify yourself to all non-employees involved and have the Company vehicle registration certificate and insurance papers available for inspection.

f) Accurate measurements shall be taken as soon as possible before the evidence is destroyed; if exact measurements cannot be made, step off or estimate the important distances. Take photo or make drawings of the accident scene before vehicles are moved showing damage and position of each vehicle. Try to give location of vehicles involved at point of impact, where vehicles came to rest, skid marks, direction they were traveling and any other pertinent information that will be helpful in the investigation. If you do not have a camera be sure to create a detailed report on the initial accident form.

g) Avoid discussing the accident and make no admissions of responsibility or fault to anyone other than authorized Company representatives. Cooperate with law enforcement but try to do so in private. Do not make statements admitting liability or fault indicating the Company will make settlement.

h) Obtain the name and badge number of any law enforcement officer at the scene if applicable.

i) All final decisions regarding liability, medical expense, adjustment and related policy decisions made with respect to handling an accident shall be made only by Management.

6. HSE Program Evaluation

6.1. Purpose

HSE audits and inspections provide Square B, LLC with an effective method of measuring the level of compliance with the Square B, LLC HSE Program. These inspections shall include all worksites and building facilities.

6.2. Policy

Square B, LLC will perform regular work site audits and inspections to ensure compliance with the HSE policy manual. This process will identify HSE improvement opportunities and help define the necessary corrective action for unsafe conditions and improvement.

6.3. Process

Square B, LLC has an internal documented audit process for management and safety to complete field audits on our crews. Square B, LLC uses very few subcontractors and when they do it is understood those audits take priority.

6.4. Auditing Responsibility

a) Management has the overall responsibility for daily administration of the inspection, audit and assessment process.

b) Management is responsible for reviewing the completed audits.

c) Management is responsible for ensuring that all subcontractors comply with HSE audit and assessment requirements.

d) Management is responsible for ensuring that corrective actions are identified, assigned, and completed in a timely manner.

e) Management shall maintain an archive of all audits, assessments, inspections, and corrective actions taken.

f) The Supervisor shall perform daily inspections and ensure all unsafe conditions are brought into compliance.

g) Employees shall conduct daily inspections in their work area and report any unsafe condition to their Supervisor.

6.5. Program Review

Square B, LLC management may elect to conduct its own corporate assessments. However, this activity shall be in addition to the audit and assessment process outlined in this section.

7. Job Site Preparation

7.1. Site Signage

The applicable hazard awareness signage shall be posted in a conspicuous location on the site visible to all individuals who may enter the site.

7.1.1. Specific Signage

Warning signs containing the word “DANGER” and stating no entry by unauthorized personal shall be posted:

a) Adjacent to a hoisting area.

b) Under a boatswain’s chair, suspended scaffold or platform.

c) Access to a confined space.

d) Potential hazard from energized overhead electrical conductors.

7.2. Requirements for Job Hazard Assessment (JHA)

Supervisors/Competent Persons shall conduct and **document** at each work site a review of the daily work assignments including the hazards associated with each task, and the measures necessary to protect against the identified hazards. This shall be accomplished by completing a Job Hazard Assessment with the involvement of **all employees** on site.

a) **Job Hazard Assessment (JHA)** is completed before each job starts, to address the overall hazards on the work site, even those that may not be relevant to the job tasks but exist on the site and how those hazards will be controlled.

b) **Daily Job Hazard Assessment (DJHA)** is to be completed each day before work, to address the hazards on that day and how those hazards will be controlled.

c) **Multi-Employer Work Site;** Square B, LLC Supervisors shall ensure that they do not create any hazard that would affect other contractors or our own employees. On these sites the following shall be considered:

   i. All personnel on site shall be part of the JHA and DJHA process,

   ii. All first aid requirements are considered and comply with the applicable legislation,

   iii. All hazards shall be considered and accounted for.

7.3. Conducting the Job Hazard Assessment (JHA)

JHA’s are done to ensure that Supervisors/Competent Persons and their employees review hazards and develop appropriate control measures before each task is performed. The Job Safety Assessment form shall be used to prepare and conduct the JHA. The JHA shall also be used to communicate the hazards and control measures to crewmembers at the start of each day. Minimum components of the JHA are as follows:

a) Health and safety hazards associated with the job/task,

b) Controls needed to eliminate the hazards,

c) Emergency response and procedures shall be in place before work starts,

d) Hazardous energy isolation,

e) Special work procedures required by the job,

f) Special precautions related to the equipment or assignment.

7.4. Daily Job Hazard Assessment (DJHA)

The daily (start-of-the-day) JHA is the final checkpoint for verifying the safety preparedness of the crew and the jobsite. As such, the discussion must verify that:

a) Crew members feel physically and mentally capable of safely performing assigned tasks,

b) Tools and machinery brought to the jobsite are in good condition and, where necessary, properly equipped with safeguards,

c) RF Monitor, respirator, rescue equipment and personal protective equipment brought to the jobsite is operable and in good condition,

d) The necessary first aid or medical provisions are readily available,

e) High-risk activities/jobs are specifically reviewed.

8. Transportation of Workers and Automobile Policy

8.1. Policy

It is the policy of Square B, LLC to provide and maintain a safe working environment to protect our employees and the citizens of the communities where we conduct business from injury and property loss. The company is committed to promoting a heightened level of safety awareness and responsible driving behavior of our employees. Management involvement and the commitment of employees will prevent vehicle accidents in conjunction with reducing personal injury and property loss claims.

Driving company owned, leased, rental or personal vehicles may be considered part of an employee's job requirements. Employees are expected to operate vehicles in a safe manner to prevent accidents that may result in bodily injury and/or property loss.

8.2. Federal Ministry of Transport

This sections does not cover those vehicles and drivers that must comply with the "Transportation of Workers and Materials" which applies to those states that fall under the Federal Transportations .

8.2.1. Management

Management personnel are responsible for ensuring that all employees under their control are furnished properly operating vehicles, ensuring their employees have the knowledge and training necessary to operate any vehicle safely and to ensure all employees are aware of, and understand, the company policies and procedures contained within this policy.

a) Implement the Motor Vehicle Safety Program in their areas of responsibility.

b) Ensure that all drivers allowed to operate a vehicle on company business are properly qualified and meet the requirements of this policy.

c) Ensure that all drivers understand and follow the policy.

d) Provide assistance and resources necessary to implement and maintain the program.

e) Investigate and report all accidents associated within the guidelines of this policy.

f) Report all accidents to the company's insurance carrier within twenty-four hours of the incident.

g) Be responsible for taking appropriate action to manage and authorize drivers as defined by this program.

h) Maintain appropriate records.

8.2.2. Foremen/Supervisors

Supervisors are responsible for following and enforcing the rules and regulations referenced within the policy and to ensure that anyone they authorize or grant permission to operate a vehicle understands and follows the company rules and regulations for motor vehicle operation.

8.2.3. Drivers

Driving company owned, leased, rental or personal vehicles may be considered part of an employee's job requirements. Employees are expected to operate vehicles in a safe manner to prevent accidents that may result in bodily injury and/or property loss.

This policy requires the full cooperation of each driver to operate their vehicle safely and to adhere to the responsibilities outlined below:

a) Always operate a motor vehicle in a safe manner and under the guidelines of this policy and applicable motor vehicle laws.

b) Maintain a valid driver's license.

c) Immediately notify your supervisor if your license becomes suspended or revoked.

d) Maintain a driving record sufficient to comply with this policy.

e) If a personal vehicle is used for company business, the driver shall comply with all requirements as specified by this policy prior to utilizing their vehicle on company business.

f) Maintain vehicles in a safe working order compliant with this policy and the applicable laws of the province or territory the vehicles are being operated in.

g) When driving for extended periods, rest breaks are encouraged to prevent fatigue.

h) Promptly report all incidents, regardless of how small, immediately to your supervisor.

8.3. General Rules

The following general rules shall be followed.

8.3.1. Drivers and Passengers

a) Only employees authorized by their supervisors will be permitted to operate a company owned, leased or rented vehicle.

b) The driver and all occupants are required to wear safety belts at all times. The driver is responsible for ensuring passengers wear their safety belts.

c) Never:

   i. Pick up hitchhikers.

   ii. Accept payment for carrying passengers or materials.

   iii. Use burning flares. The preferred method is the use of reflective triangles.

   iv. Assist disabled motorists or accident victims beyond your level of expertise. If you are unable to provide the proper first aid, restrict your assistance to calling the proper authorities.

   v. Carry firearms unless authorized by management.

d) When parking a vehicle every effort shall be made to find a location that allows either; pull through parking or back-in parking, so when leaving the driver has a better view when pulling out.

8.3.2. Personal Vehicles for Company Business

Employees who drive their personal vehicles for company business are subject to the requirements of this policy and program and shall:

a) Maintain their vehicle in safe operating condition at all times when using the vehicle for company business.

b) Provide proof of insurance certificate that shall be maintained within the office that the employee reports to.

c) Ensure there is not a “business use” exclusion clause or any clause relating to the restricted use of the vehicle for business use, nor at any time shall such a restriction be adopted to the driver’s exclusion on their insurance policy.

8.3.3. Rental Vehicles

a) Drivers must comply with rental companies’ guidelines and restrictions along with this policy.

8.3.4. Temporary Hire Employees

Temporary and part time employees shall comply with the requirements of this policy.

8.3.5. Qualifications

All employees who drive a company vehicle or their personal vehicle on company time must be qualified to do so.

a) Ensure employees possess a valid driver's license applicable to the vehicles they will be required to operate.

b) Review past driving performance and work experience through previous employer’s reference checks or any other lawful means available.

8.3.6. Driving Evaluation

Before any person is allowed to drive a company vehicle, they must be evaluated by their supervisor or management on the type of vehicle they will be driving.

8.3.7. Disqualified Drivers

ALL EMPLOYEES THAT ARE DISQUALIFIED FROM DRIVING EITHER PERMANENTLY OR TEMPORARILY SHALL SIGN A RESTRICTION DOCUMENT AND RE-SIGN THE SAME DOCUMENT TO BE REINSTATED.

8.3.8. Monitoring Unauthorized Drivers

All employees have the responsibility to ensure unauthorized employees do not drive and:

a) It is each employee’s responsibility to confirm that your fellow employee is authorized to drive. An employee who possesses a valid driver’s license does not necessarily qualify to drive under this policy.

b) Management will enforce disciplinary action to any supervisor or employee who allows an unauthorized employee to drive. Disciplinary Action may result in immediate termination.

c) Additionally, if unauthorized use results in an accident, bodily injury or property damage, the responsible employees will be held accountable for restitution to the company for all damages and costs incurred.

8.3.9. Vehicle Assignment

Vehicles shall only be assigned to a person who is qualified as a driver under this policy. That person shall be responsible for the vehicle and its company contents while it is assigned to them.

a) Completing all necessary inspections per company policy and applicable laws.

b) Ensuring that management is aware of necessary repairs and the priority of such repairs.

c) Ensuring necessary repairs are completed in a timely manner.

d) Not permitting ignition keys to be in possession of an unqualified driver.

8.3.10. Inspection and Maintenance

a) The vehicle shall be inspected daily prior to use and defects noted if applicable.

b) No vehicle shall be operated if there are any major defects present.

8.3.11. Unauthorized Use

An employee shall not drive a company owned or rented vehicle:

a) When they have consumed alcohol or have taken any type of drug or substance, legal or illegal by law, which may impair their ability to drive.

b) When unauthorized by management.

c) If they possess a driver's license which does not comply with this policy.

d) If they do not possess a valid driver's license.

e) If deemed by the company as an unapproved or unauthorized driver.

No alcoholic beverages whether in an opened or closed container shall be permitted in the cab of a truck or the driver's/passenger compartment of a passenger vehicle. Furthermore, the transportation of any alcoholic beverage must comply with applicable provincial or territorial laws.

8.3.12. Telephones, Walkman's and Pagers

The following procedures apply to employees driving on company business who wish to use cellular telephones or portable electronic devices in vehicles:

a) The use of cellular phones is allowed, only if they are hands free.

b) There shall be no texting while driving.

c) Employees are prohibited from using a Walkman or similar device, which may impair their hearing while operating a motor vehicle.

8.3.13. Company and Personal Property

Employees are responsible for company property such as computers, work papers and equipment under their control.

The company will not reimburse the employee for stolen personal property.

8.3.14. Vehicle Content

Vehicles in general shall contain at a minimum:

a) A standard first aid kit.

b) A fire extinguisher of a 5 lb. ABC rating.

c) Insurance forms.

d) An initial vehicle accident form.

e) A vehicle binder that may include some of the above.

f) All vehicles shall have a roadside emergency kit that at a minimum shall contain reflectors or flares in case vehicles must be parked on the side of the road.

8.3.15. Weather and Traffic Conditions

a) Drivers shall take reasonable care to evaluate road and weather conditions during adverse weather, making sure that the vehicle being used is adequate for the conditions, or if conditions are too severe cancelling the trip.

b) Make sure the vehicle is equipped with emergency supplies and that there is a means of communicating in case of emergency (ie cell phone).

c) When driving on private roads, we must comply with the rules and regulation of the highway manager controlling those roads.

d) When driving on private roads, we must comply with the rules and regulation of the highway manager controlling those roads.

8.3.16. Securing Equipment or Material

While securing equipment in a vehicle or on a trailer all employees shall ensure:

a) Any equipment being carried in the same compartment as the passengers shall be tied down and secured to prevent injury to the passengers.

b) When material is regularly carried with workers, then there shall be an area designated for that equipment and that equipment must be secured in place.

c) All material in the vehicle or on a trailer shall be properly secured to ensure material cannot; blow off, fall from, fall through or otherwise be dislodged.

8.3.17. Fueling

Before fuelling the following precautions shall be taken.

a) Shut off the engine,

b) No smoking,

c) Check for fuel leaks,

d) Do not overfill the tank,

e) Replace filler cap when complete.

9. Fall Protection

9.1. Policy

Square B, LLC shall ensure there is a program in place that provides 100% fall protection on all sites where there is the potential of an employee falling six feet or more to a lower level.

Square B, LLC supervisors shall monitor all employees for compliance to the Square B, LLC requirements and shall take immediate action when non-compliance is observed.

When evaluating fall hazards, Square B, LLC shall assess the fall hazards and the available controls. The crew leader will address all climbing processes with the employees through the JHA meeting by:

a) First attempt to eliminate the fall hazards associated with the work task entirely. (For example, perform as much work as possible at ground level).

b) Second, attempt to utilize fall prevention controls by selecting the most suitable controls from the following:

   i. Guardrail systems (work platforms with approved handrails, scaffolds, etc.)

   ii. Mechanical lifting systems (JLG, scissor lift, man-baskets, etc.)

   iii. Climbing systems (stairways, fixed or portable ladders, etc.)

c) Third, attempt to utilize a Personal Fall Arrest System (PFAS) including all required components and additional hardware:

   i. Full body harness

   ii. Shock-absorbing lanyards

   iii. Connectors

   iv. Suitable anchorages

   v. Lifelines

   vi. Rope grabs

   vii. Controlled descent device

   viii. Develop Approach to Manage Fall Hazards

Free climbing is not allowed at any time. Violation of this policy will result in immediate discipline.

9.2. General Requirements

a) All Square B, LLC employees shall comply with the rules and regulations in OSHA and the applicable industry standards.

b) All Square B, LLC employees shall wear fall protection equipment that complies with ANSI Z359 design standard.

c) Only personnel meeting Square B, LLC Authorized Climber, Competent Climber or Competent Rescuer requirements are allowed to work at elevated heights.

d) For those employees who want to use their own equipment not supplied by Square B, LLC, they must first have a documented equipment inspection approved for use by a Square B, LLC Competent Person.

9.3. General Design Requirements

a) All fall protection equipment shall have a minimum breaking strength of 5,000 lbs. or 23 kN.

b) The use of non-locking snap hooks for fall protection is prohibited.

c) Do not alter fall protection equipment.

d) All fall protection equipment shall be properly fitted as specified in the regulations and standards.

e) All fall protection systems shall be so designed to ensure that peak arresting forces do not exceed 1800 pounds or 8 kN.

f) All fall protection systems shall be so designed to prevent a free fall of more than six feet.

g) When employees are working at a location where a lower level would stop a fall before the fall arrest equipment can fully deploy, then steps shall be taken to shorten the distance of the fall to ensure the equipment can deploy properly.

10. Tower Fall Protection

10.1. Training

a) An Authorized Climber shall work to gain experience in the field, then go through further classroom training to become a Competent Climber.

b) A Competent Climber can become a Competent Rescuer by going through practical training in the field.

c) It is a recommended practice for all Square B, LLC workers that have a Competent Rescuer certification to complete field practice training three hours twice a year to keep their rescue status.

10.2. Work Positioning Systems

Is a system used to support a worker so that the worker's hands are free when they reach their work position. It is not considered part of a Personal Fall arrest System and is not considered a component or method of fall protection.

a) At Square B, LLC all positioning device systems should comply with the ANSI Z359 standard.

10.3. Anchorage

a) An anchorage point should always be a main component of the structure.

b) An anchorage and their components shall have a minimum Breaking Strength of 5000 pounds or 23 kN.

c) An anchorage used specifically for fall protection and is designed by an engineer for that purpose shall have a minimum Breaking Strength of 3.600 lbs or 16 kN.

10.4. Vertical Lifeline

a) A lifeline shall extend to the ground or be provided with a positive stop that prevents the rope grab from running off the end of the lifeline.

b) Only one person shall **actively** use a lifeline at a time.

c) A vertical lifeline termination or eye must not decrease the capacity of the rope to less than 5000 pounds or 23 kN.

10.5. Horizontal Lifeline

a) A temporary horizontal lifeline shall be designed by a certified professional engineer.

b) A temporary horizontal lifeline shall be installed by a Competent Person under the guidance of a Qualified Person.

10.6. Rope Grab

a) All employees must use only those rope grabs that match the size and type of rope they are using.

b) Always ensure the rope grab is installed properly.

c) Never use a lanyard attached to the dorsal D ring that would create a distance greater than three feet between the harness d-ring and the centre of the vertical lifeline.

d) Sternal connections shall have a maximum length of nine inches or 23 centimeters.

10.7. Dorsal Shock-Absorbing Lanyard

In a free fall situation, a shock absorber shall be used to keep the arresting forces below 1800 pounds or 8 kN.

a) Employees shall always use a shock-absorbing lanyard in a fall arrest system.

b) Fall Protection Lanyards shall not be used as body positioning devices.

c) Do not hook lanyards back into themselves unless they are designed for that purpose

10.8. Full Body Harness

a) Only full body harnesses can be used for fall protection with a dorsal D ring located at the centre of the shoulder blades for attachment to the shock-absorbing lanyard.

b) It should have a D ring located at the chest (Sternal) for attachment to a fixed Safety Climb System.

c) An independent body belt shall never be used for fall protection at any time.

10.9. Y-Lanyards

a) Shall only be attached to the dorsal D-ring of the full body harness.

b) When attaching your lanyard to the structure it should be so attach to prevent a free fall greater than six feet or 183 centimeters.

10.10. Inspection and Care of Equipment

a) Supervisors and workers are responsible for ensuring that their equipment is inspected daily before use and that the inspection is documented.

b) Defective or worn equipment shall be taken out of service and returned to the office where it will be either; returned to the manufacturer for repair or destroyed.

c) Any equipment exposed to a fall shall be taken out of service.

d) A Competent Person shall complete a documented inspection once a year.

10.11. Fixed Ladder Safety Climb System

a) The connection between the carrier and the point of attachment to the harness shall not exceed nine inches.

b) The connection between the carrier and the fixed safety climb system shall be attached to the harness at the sternal d-ring attachment point.

c) A fixed ladder safety climb system shall not be used as a work positioning device.

d) When using a safety glide, the employee must ensure it matches the system in place.

10.12. Ladder Cage

Ladder cages are not recommended for use on a Telecommunication Structures and are not considered a fall protection system. In situations where workers must climb a ladder with a caged system, 100 percent fall protection system must be used.

10.13. Fall Protection in Aerial Lifts, Scissor Lifts, Man Baskets and Cranes

a) Employees operating aerial lifts shall wear a body harness and lanyard attached to the aerial lift. Employees shall not attach the lanyard to an independent structure.

b) Employees riding in a crane suspended work platform shall wear a body harness and lanyard attached to an anchorage in the platform.

c) Employees riding a personnel platform connected to a hoist line may connect to the platform or to a sling independent of the platform.

10.14. Fall Protection on Roof Tops

If employees are exposed to a fall more than six feet to a lower level then a fall protection system must be used.

a) The use of Fall Protection is not necessary if a parapet wall meets or exceeds the requirements of a guardrail are in place.

10.14.1. Warning Line on Roof Tops

If there is no parapet wall or guardrail and employees will never work closer than six feet from the edge, then fall protection is not necessary and a warning line can be used.

a) The intent of the Warning Line is to alert employees when they are getting close to the edge and it must be of adequate design:
   i. Shall be a minimum of six feet from an edge where a fall could occur.
   ii. The line shall have a minimum breaking strength of 200 pounds.
   iii. Be flagged a minimum of every six feet with high visibility material.
   iv. The line shall be 39 inches at its highest point and no lower than thirty two inches at its lowest point.
   v. The line shall be able to take a side load of 16 pounds.

10.14.2. Fall Restraint System on Roof Tops

If there is no parapet wall or guardrail then a Fall Restraint system must be used to prevent any possibility of an employee from being exposed to a fall and must be designed accordingly.

a) Shall be design to take two times the maximum arresting force and in lieu of and engineered system be able to withstand a force of 1,000 pounds to ensure that no movement is possible for situations like tripping or slipping.

10.15. Descent Control

a) Controlled descent systems shall include at least two independent lines for adequate protection; one line for work positioning and one for fall arrest.

b) The descent line shall have a mechanical termination, or touch the ground so as to prevent the descent control device from going past the end of the rope.

c) The two lines shall have two independent anchors separate from each other.
   i. The Fall Arrest system shall have a 5000 pound anchor.
   ii. The work descent control system shall have a 5000 pound anchor
   iii. An emergency descent control system shall have a 3000 pound or 13.4 kN anchor and system.

d) Types of descent control devices;
   i. Must be automatic lock-off.

10.16. Rescue Plan

On all sites where drill shaft work is being completed, there shall be a documented rescue plan in place before work starts.

10.16.1. Working Alone

No worker shall work aloft alone unless there is a rescue plan in place that includes another rescue person on site that is qualified to perform a rescue or a written plan in place that would provide for the prompt rescue of that person.

11. Outside Elements

Square B, LLC shall ensure that all workers are trained to understand and follow the guidelines as outlined below in this section. The crew leader through the JHA process shall discuss the applicable hazards with the employees to ensure all workers understand the requirements for the conditions that day.

11.1. Sun Exposure

The most common cause of skin cancer is over exposure to the sun. Know your skin and take the proper steps to cover the areas of exposure.

11.2. Wet Weather

a) Wet weather makes for slippery walking conditions, be sure to take extra time and care.

b) Climbing towers in wet conditions can be extremely hazardous, take extra time and care.

c) Employees working in buildings should always be aware of floor sign cones for wet floors.

11.3. Hot Weather

a) Supervisors should schedule the heaviest work during the cooler hours of the day.

b) Employees working in the direct sun shall take extra precautions to prevent sunburn and heat stress.

c) Light meals should be eaten during the day.

d) Be sure there is plenty of water readily available on site.

e) Water containers shall be marked and have a spigot.

f) Water containers are for water only; do not use them for a cooler or container.

g) Employees must remember that a lack of sleep, obesity, alcohol use and similar factors can increase the risk of heat related injuries.

h) All workers showing signs of heat stress shall be removed from the hot environment to a cool area and the proper first aid shall be made available.

11.4. Lightning and Adverse Weather

a) If weather conditions create a hazardous situation in the opinion of the Supervisor, the Supervisor has the authority and responsibility to suspend work.

b) Whenever an electrical storm can be seen, heard, or is known to be in the vicinity, all work aloft and on the ground must be suspended immediately until the storm clears.

c) Workers will move away from a tower or pole until the storm clears.

11.5. Severe Cold Weather

a) Clothing should be worn in light, loose fitting layers and with a proper hat, mitts and boots.

b) Extra layers of cloths may reduce a person's dexterity and extra time and care should be taken to eliminate the hazards created by these conditions.

c) Employees must remember that a lack of sleep, obesity, alcohol use and similar factors can increase the risk of frostbite and hypothermia.

d) Crews should work in pairs so that they can watch each other for the effects of frostbite and hypothermia.

e) The supervisor on site shall monitor the weather and make the decision when it is too cold to work.

f) When working in remote areas, be sure all vehicles are equipped with emergency cold weather equipment before setting out on a trip.

g) All workers showing the initial signs of frost bite or hypothermia shall be removed from the cold environment to a warm area and the proper first aid shall be made available.

11.6. Ice and Snow Conditions

a) Ice and snow make conditions slippery, be sure to take extra time and care.

b) In these conditions ensure you are wearing the proper equipment for these conditions

12. Personal Protective Equipment

Square B, LLC shall supply PPE to all employees to mitigate hazards in the workplace.

12.1. Policy

As referenced in this manual the purpose of the policy is to have all employees use the proper PPE as specified in the manual.

a) Square B, LLC shall comply with the applicable regulations when supplying PPE equipment at no cost to the employee.

b) All employees shall wear the proper PPE for the hazard

c) All PPE used by employees shall comply with the applicable industry standards.

d) All employees shall be trained in the proper use; care, limitations and maintenance of the personal protective equipment.

e) All employees will inspect their personal protective equipment prior to use.

f) All defective equipment shall be removed from service.

12.2. Head Protection

a) Head protection shall be worn at all times by employees and non-employees under the following conditions;

   i. In designated hard hat areas,

   ii. When there is a clear present danger of falling or flying objects,

   iii. At the direction of the supervisor and,

   iv. Indoors and in shops and storerooms where they are subjected to falling objects or other hazards.

b) Hard hats shall be kept clean and regularly inspected.

c) Hard hats found to be defective shall be replaced.

d) If a worker is exposed to an electrical hazard then appropriate non-conductive hats must be worn.

e) Bump caps and metallic hard hats or caps are prohibited.

f) Welders are only required to wear head protection (hard hats) during welding operations if there is an overhead hazard.

g) Hard hats shall not be altered in any way.

h) All hard hats shall conform to the Z89.2 standard.

12.3. Eye Protection

All personnel on a Square B, LLC construction project shall wear approved protective eyewear whenever there is a hazard and shall ensure that:

a) Eyewear meets the requirements of the ANSI Z87.1 standard.

b) All eye protection equipment shall be in good condition.

c) Tinted lenses are not worn inside buildings or other structures with limited illumination. This includes prescription glasses.

d) Safety glasses shall have side protection.

e) Persons who require prescription or corrective eyeglasses must have a means of complying with the applicable safety standards for safety glasses.

f) Welders wear proper helmets that protect the eyes from welding flash and the chipping process.

g) Eye protection equipment shall be worn on jobs;

   i. In all designated eye protection areas,

   ii. On all jobs where it has been specified that eye protection is required,

   iii. In any situation where there is a danger of flying objects.

h) Additional specialized eye protection (Full Face Shield) shall be worn as required by the job like when there is a possibility of particles entering under or through the side of regular safety glasses.

Contractual obligations may exceed our program and in that situation we must follow our contractual obligations.

12.4. Respiratory Protection

If workers may be exposed to air containments that exceed the exposure limits, then the following guidelines shall be followed.

a) Before beginning any type of work a qualified individual shall be consulted to review the hazards and recommend a procedure.

b) Only approved respiratory protection equipment that complies with the current standards shall be worn.

c) Respiratory equipment shall be used, stored, and maintained in accordance with the manufacturer's requirements and Square B, LLC's respiratory protection program.

d) Employees must wear the applicable respiratory protection when there is a possibility of exposure to hazardous materials or dangerous atmospheric conditions.

e) Respirators will be selected on the basis of the hazard to which the employee is exposed.

f) Each employee required to use a respirator will be instructed on the proper use, maintenance, and limitations of the respirator in use. The instructions will include the following:

   i. A description of the hazard(s) with possible health ramifications of noncompliance,

   ii. Proper methods of donning the equipment,

   iii. Methods of self-testing to assure proper fit,

   iv. Information on interference found with presence of facial hair,

   v. Proper cleaning and caring for equipment,

   vi. Methods of disassembly and reassembling of equipment and

   vii. Limitations of equipment and precautions necessary to prevent failure,

g) When not in use, respirators will be stored in clean and sanitary locations and protected from sunlight and physical damage.

h) A respirator will be worn only by the person to whom the respirator was assigned.

i) Any person using a respirator shall be clean shaven where the mask meets the face.

12.4.1. Oxygen Deficient

In situations where there is an oxygen deficient atmosphere, an airline respirator must be used under the following conditions.

a) Wear a full face piece positive pressure respirator which is either an SCBA or an airline respirator with an axillary self-contained air cylinder of sufficient capacity to permit the worker to escape unassisted.

12.5. Hearing Protection

In areas where noise levels may exceed 80 dBA for long periods of time; then Square B, LLC shall implement a hearing protection program for the affected employees.

12.5.1. Facilities

In existing facilities every effort shall be made to reduce noise levels by eliminating or modifying the noise source. Some or all of the following methods will be used: substitute quieter equipment, enclose the noise source, install acoustical barriers or sound absorbing materials.
When renovating an existing facility or building a new facility; consideration shall be given to the design of the structure so as to achieve the lowest reasonably practicable noise levels in that structure for the type of work being completed.
If new equipment is being put in place, then the noise that machine makes and the location where it is placed shall be taken into consideration.

12.5.2. Plan

The plan will include education and training for all affected workers to recognize and mitigate the hazards and the plan shall include the following:

a) Hearing protection guidelines shall comply with the most recent applicable ANSI standard.

b) The noise level is measured in accordance with an approved method.

c) The noise level measurement process will be supervised and evaluated by a Competent Person.

d) The noise level measurements shall be archived and kept on record for future reference.

e) On request by an employee, Square B, LLC shall make those records available.

f) The plan shall be reviewed per the applicable provincial regulations.

g) The plan shall be overseen by the RS&QA Manager.

12.5.3. Exposure Levels Above 85 dBA

When it is not reasonably practical to keep the noise levels at 85 dBA L or below then a documented plan shall be developed and implemented.

a) Mandate that hearing protection that reduces the noise level received into the workers ears to not more than 85dBA be worn in the applicable areas.

b) Train the workers in the selection, application and maintenance of hearing protection.

c) Establish areas and post signs where hearing loss protection may be required to be worn.

12.6. Foot Protection

Square B, LLC employees shall wear appropriate footwear for the applicable hazard.

a) Where there is a hazard of pinch points or dropping material, sturdy leather work boots/shoes with appropriate reinforced toes are required.

b) When working with electricity the boots shall have electrical protection.

c) When working in areas where there is a hazard of punctures then the boots shall have puncture resistant soles.

d) Additional foot protection, such as metatarsal guards shall be worn any time the job being performed creates additional hazards of foot injury.

e) When the weather is cold and regular work boots are not adequate, cold weather boots with appropriate reinforced toes may replace the regular work boots.

f) Industrial rubber boots with appropriate reinforced toes may be worn when wet conditions make the use of leather work boots impractical.

12.7. Hand Protection

All personnel engaged in work shall wear gloves appropriate for the task at hand.

a) Appropriate work gloves shall be worn whenever personnel are performing any work where their hands and fingers might be cut, punctured, pinched or burnt by the material they are handling.

b) Any time an employee is using a knife the applicable gloves must be worn.

c) All personnel who are working in energized electrical panels and components shall use approved rubber insulated gloves.

d) Special gloves approved for use in handling acids, caustics, or other potentially injurious substances shall be worn when working with these materials.

e) Gloves are required to be worn at all times on site, except:

   i. During lunch and break periods providing no work is in progress in the immediate break area

   ii. When operating equipment with delicate controls.

   iii. When the gloves would cause an additional hazard due to the loss of sensitivity.

   iv. When there is no construction activity taking place on the site. (site audit, site bid walk, etc.)

   v. When operating rotating tools or equipment, such as a conduit threader, a drill press, or other rotating machinery.

f) Work gloves should be in good condition, free from holes and fraying.

12.8. Dress Requirements

All personnel are required to wear clothing appropriate for the work being performed.

a) Shirts worn by personnel must have sleeves at least 4-inches (100 mm) in length. Knit shirts, sleeveless shirts, sleeves rolled up onto the ball of the shoulder, and other such apparel or practices are prohibited.

b) All employees shall wear long pants when exposed to field or plant conditions where scrapes could occur.

c) Persons working near moving machinery parts shall take care to ensure proper clothing, hair or jewelry are being prevented from being caught by moving components.

d) Individuals working with harmful substances that can be absorbed through the skin must wear the applicable clothing to prevent contact with the substance.

12.9. Clothing, Jewelry and Accessories

a) Loose dangling jewelry, long hair or flapping clothing shall not be worn when working around moving machinery or rotating parts.

b) When work is performed within reaching distance of exposed energized parts or equipment, the employee shall remove or render nonconductive all exposed conductive articles, such as key or watch chains, rings, or wristwatches or bands, unless such articles do not increase the hazards associated with contact with the energized parts.

c) Special care shall be used to make sure that **rings** and other jewelry items do not catch on fixed objects when employees move from one elevation to another. It is recommended that rings not be worn at work.

d) Employees engaged in climbing AM structures, or in work areas where there is danger of burns to the body shall wear a long sleeve shirt and long pants.

e) Personal radio headsets and earphones shall not be worn while on the job.

f) Where there is exposure to electric shock or arc flash hazards, affected employees shall wear approved fire retardant (FR) apparel. Clothing made from the following types of fabric, either alone or blends, is prohibited; acetate, nylon, polyester, rayon.

12.10. High Visibility Clothing

In situations where distinguishing apparel is required for the purpose of identifying a worker's location or for the worker's well-being, the apparel must be of a color which contrasts with the environment and must have fluorescent trim for daytime use and retro reflective trim for nighttime use.

13. Confined and Restricted Spaces

The confined and restricted space program is designed to ensure that potential hazards are identified prior to entry and to ensure that safe work practices are utilized during all activities.

13.1. Confined Space

A confined space is an enclosed or partially enclosed space that is not designed or intended for continuous human occupancy with a restricted, limited or impeded means of entry or exit because of its construction and is usually associated with oxygen content for breathing due to ventilation.

13.1.1. Description

a) A "Confined Space" has the following characteristics:
   i. Oxygen deficiency or enrichment
   ii. Flammability
   iii. Explosiveness or the
   iv. accumulation of toxic gases,
b) Confined spaces may include, but are not limited to:
   i. Sewers, pipelines, septic tanks,
   ii. Vessels, bins, ventilation or exhaust ducts, underground utility vaults and manholes,
   iii. Vaults, tunnels, and open top spaces more than 4 feet deep,
   iv. Water Towers, and
   v. Some Controlled Equipment Vaults (CEV) depending on configuration.

13.1.2. Hazard Identification

Square B, LLC shall identify potential confined space hazards as they related to their scope of work and defined in section 14.1.

13.1.3. Pre-Entry Evaluation

Before allowing authorized employees to enter a confined space, the Competent Person shall:

a) Evaluate conditions in and around the confined space to determine safe entry conditions/precautions.
   i. Is it nonhazardous,
   ii. Hazardous due to work task, and
   iii. Hazardous due to internal conditions.
b) Evaluate the following conditions:
   i. Oxygen acceptable range is 19.5 to 23.5
   ii. Combustible gas and vapors are in the acceptable range of 0 to 10 percent of the Lower Flammable Limit based on the conditions.
   iii. That toxic gases and airborne combustibles are at Permissible Exposure Levels (PEL).
c) Authorized individuals will receive the following direction before entering the work site:
   i. How to recognize the symptoms applicable to the hazard,
   ii. Consequences of the exposure,
   iii. When to evacuate,
   iv. Adhering to instructions
   v. Confirm the communication process,

13.1.4. Work Practices

To provide a safe work environment, Square B, LLC shall implement a job safety plan and procedures that shall take into account the following items to inform all employees of the existence, location, and danger posed by the confined space:

a) A completed and approved "Confined Space Permit shall be posted on site for the duration of the job.

b) Warning signs shall be used to inform employees of the existence of a confined space.

d) Continuously monitor the internal atmosphere of the confined space with a calibrated direct-reading instrument.

e) Stand-by and maintain communication with the employees while the space is occupied.

c) There shall be an Entry Supervisor or Attendant at the confined space entrance at all times to control:

   i. Authorized worker flow,

   ii. Confirm worker duties and responsibilities,

   iii. Communicate with workers,

   iv. Know the emergency plan so the individual can initiate the plan,

   v. Lock the entrance if there is a change in the hazard or work is complete for the day,

d) Only those individuals authorized due to training and experience may enter a confined space.

e) Review how the applicable work tools interact with the hazard.

f) The applicable rescue equipment and plan shall be on site, specific to the job.

g) Individuals certified in First Aid/CPR shall be on site.

h) All work permits shall be kept on file for twelve months.

13.2. Restricted Space

A restricted space is an enclosed or partially enclosed space, not intended for continuous human occupancy that has restricted, limited or impeded means of entry or exit because of its design or construction. The confined space criteria have been eliminated and the hazard is defined as the difficulty of getting in or out of the space.

a) Restricted space may include but are not limited to an:

   i. Electrical or communications vault,

   ii. Building crawl space,

   iii. Trench properly supported,

   iv. Deep excavation needing ladders for access.

13.2.1. Work Practices

To provide a safe work environment, Square B, LLC shall implement a job safety plan and procedures that shall take into account the following items to inform all employees of the existence, location, and danger posed by the restricted space:

a) A hazard assessment must be performed prior to entry,

b) The workers are trained to recognize the hazards associated with the assigned duties,

c) Workers cannot enter or remain in the restricted area unless an effective rescue plan is in place,

d) There must be a means of communication at all times and

e) A safe means of entry and exit must be available to all workers.

14. Hazardous Communications

This section along with, training is intended to inform workers and to provide information about the globally harmonized system for handling hazards material.

14.1. Training

Employees who work with or are potentially “exposed” to Chemical or Biological hazards shall receive initial training and any necessary retraining on hazardous materials requirements and the safe use of those materials to ensure employees are not over exposed.

The training provided shall emphasize these elements:

a) Summary of the standard and this written program, including what hazardous chemicals are present, the labeling system used, and access to hazardous material information and what it means.

b) The chemical properties of hazardous materials (e.g., flash point, reactivity) and methods that can be used to detect the presence or release of chemicals.

c) The physical properties of hazardous materials (e.g., potential for fire, explosion, etc.)

d) Health hazards, including signs and symptoms of exposure associated with exposure to chemical or biological materials along with any medical condition known to be aggravated by these exposures.

e) The procedures to protect against hazards (e.g., engineering controls; work practices or methods to assure proper use and handling of chemicals; personal protective equipment required, and its proper use, and maintenance; and procedures for reporting chemical emergencies.)

14.2. Labelling

Square B, LLC shall comply with federal legislation that covers:

a) Labeling,

b) Protect trade secrets and

c) Applying material data sheets in the work place.

14.3. Classification

a) The supplier is responsible for classification and testing to obtain information on a product.

b) The employer is responsible for classification of the product in the work place.

c) The worker is responsible for ensuring the information is there on the product.

14.4. Labels

Employees are responsible for ensuring:

a) All hazardous chemicals in containers are properly labeled and updated, as necessary and that newly purchased materials are checked for labels prior to use.

b) That all containers shall be properly labeled.

c) All labels shall be legible.

d) Crew leaders refer to the corresponding MDS when assisting employees in verifying label information. If employees transfer chemicals from a labeled container to a portable container that is intended only for their immediate use, no labels are required on the portable container.

e) If decanted materials are not for immediate use, then a label with the necessary information must be applied to the new container.

f) All labels shall cover: product identifier, supplier, MSDS statement, hazard symbol, risk phrase, precautionary measures and first aid measures.

14.5. Containment

In situation where spillage of a chemical could occur, then the proper steps shall be taken to protect the environment from that spillage.

14.6. Safety Data Sheets (SDS)

Based on federal law all hazardous material must have a hazardous material label attached to the container and there shall also be a data sheet for that particular hazardous material on site for workers to reference.

The employer shall ensure:

a) There are up to date sheets on site.

b) Take steps to review existing sheets for dates over three years.

c) Ensure sheets are readily available to the worker on site and

d) Have a program in place to train employees on reading the sheets.

14.7. Chemical, Biological Hazards and Harmful Substances

Square B, LLC workers are not routinely exposed to hazardous substances. On work sites where there is a possibility of workers being exposed to a chemical or biological agent, then Square B, LLC shall ensure there is a documented system in place to maintain a record of all the hazardous substance on site. In situations where there may safer products on the market, they shall be used. The plan shall:

a) Identify the chemical.

b) Take air samples or air monitoring to ensure occupational exposure limits are not exceeded.

c) The possible health effect it will have on workers.

d) The plan to minimize the exposure.

e) Ensure the workers are trained and understand the plan.

f) Ensure immediate access to appropriate emergency equipment.

g) Make every effort to engineer control of hazardous chemical agents.

h) Provide appropriate PPE if engineered controls are not practical to adopt.

i) No food or drinks shall be allowed in contaminated work areas.

j) All PPE that has been exposed to hazardous material shall be cleaned before reuse.

k) If there is a possibility of exposure to corrosive substances, washing facilities shall be made available.

15. Safe Work Practices

This section includes the safe work practices that apply to our work. Please note: Throughout this HSE Manual, we have listed Imperial and metric measurements for your convenience.

15.1. Aerial Lift Operations

Square B, LLC does not own any aerial devices. All rented aerial lifts in regards to design shall comply with the applicable ANSI standards. Square B, LLC shall verify with the rental company that records of inspections and tests are kept for each unit. The unit shall be inspected yearly and carry a certificate completed by a Qualified Person ensuring the unit complies with the original design and any repairs.

15.1.1. Authorization

Square B, LLC employees who operate aerial lifts (JLG, scissors lifts, articulating boom platforms, etc.) shall be qualified to operate the applicable unit by experience or certification based on Federal regulations and the applicable state training requirements.

The Competent Person on site shall confirm the employee is either qualified or personally observe the employee operating the equipment to ensure competence of that employee on the unit.

15.1.2. A Competent Person:

a) Ensure that prior to any work activity, the JHA has addressed any special hazards the lift may create.

b) Upon delivery and prior to accepting any rented/leased equipment, the equipment shall be checked to ensure the maintenance and repairs comply with ANSI standards or equivalent. Any non-operational functions discovered during inspection shall be addressed before operations can start.

c) Ensure there is a current inspection tag on the unit.

d) Conduct a documented pre-start inspection of the equipment prior to use each day.

e) Ensure all warning placards on the machines are legible.

f) Ensure the controls are plainly marked as to their function and are operating properly.

g) Ensure unit is not used unless all safety devices are in place and operational.

h) Ensure the individual operating the equipment is familiar with and qualified to operate the equipment.

i) Ensure that the equipment is not left unattended unless it has been secured against inadvertent movement such as setting the parking brake, placing the transmission in the manufacturers specified park position and by chocking the wheels where necessary.

15.1.3. General Operations:

a) Use equipment only on level ground or as specified by the safe operating procedures.

b) The units load limits shall not be exceeded.

c) Utilize aerial lifts for lifting personnel and small hand tools only. Aerial lifts are not designed for lifting loads.

d) Consider the overall dimensions of the unit and always be sure that there is sufficient clearance before moving under any overhead obstruction or when working near electrical lines.

e) Not walk under a boom to gain access to the platform.

f) Not secure the platform off to any structure for any reason.

g) Stand on the platform floor. Standing or sitting on the railing is prohibited.

h) Always look in the direction the machine is moving.

i) Not rest the boom or basket on a steel structure of any kind.

j) Wear safety harnesses and tie-off to the manufacturers provided anchorage point within the platform. If there is no designated anchorage an adequate fall protection anchorage shall be selected or a restraint system shall be used. This applies to all aerial lifts.

k) Attempt to perform work from within the basket at all times. If it becomes necessary to exit the basket at elevated heights, 100% Fall Protection methods shall be utilized during the transfer from the basket to an approved anchorage location.

l) If you are working from the basket, your fall protection must be attached to the basket, not to the structure you are working on.

m) Ensure that a 5lb ABC fire extinguisher (mounted in the basket) is provided when performing activities that present a potential fire hazard.

n) Erect barricading or use a flag person when operating in high-traffic areas.

o) Keep their hands off the external portion of the basket when raising or lowering the basket.

p) If the unit does not have a backup alarm during the backing process, a signal person shall be used.

q) The unit will have controls both top and bottom along with a qualified operator on the ground in case of emergencies.

15.2. Air Compressor

Supervisors shall verify that operators are capable and qualified on each type of equipment before allowing the equipment to be operated unsupervised.

a) Operators shall perform a pre-operational check of all air hoses, couplings and connections to determine if leakage or other damage exists.

b) Wear appropriate personal protective equipment consistent with the hazard. Hearing and eye protection shall be worn when operating the air compressor.

c) Decompress air from compressor by shutting off the valve prior to removing lines and hoses or any attachments.

d) Watch for flying sand and other debris when operating compressor. Be aware of wind direction and try to work upwind if possible.

e) Make sure hose connections are secure to avoid the hose coming loose during use. High-pressure air can cause serious injury.

f) Check the pressure-relief valve and relieve the pressure before transporting.

15.3. Asbestos

Asbestos is a general term given to a group of naturally occurring mineral silicates that are made up of long thin fibers. These fibrous minerals were used in a wide range of products in construction and industry because of their unique properties which include; heat resistance, chemical resistance and heat and electrical insulation.

Asbestos in its manufactured state is reasonably stable; it is only when the material is disturbed by drilling and cutting, that the fine fibers get suspended in the air where they can be inhaled by workers. Serious health effects can result when harmful levels of asbestos fibers are inhaled.

In general buildings built after 1970 no longer used asbestos in their building materials. If we are working on buildings older than 1970 where the scope of work involves drilling or cutting into the existing material, then we should ensure we ask our customers and building owners if the building has asbestos material.

It is Square B, LLC's stance that our workers are not trained to work with asbestos material and a qualified asbestos company will be brought in to complete a risk assessment and develop an exposure control plan to complete the work.

As a minimum requirement Square B, LLC workers shall be aware of the following;

a) If the building is older than 1970, then ensure we ask the appropriate individuals if there is any asbestos in the building. All parties are responsible for ensuring no worker is exposed to asbestos.

b) Most buildings are posted, look for signage on doors and walls.

c) Only work under an exposure control plan developed by a qualified person or company.

15.4. Batteries

When working on equipment batteries the installer must be familiar with the equipment manual and at a minimum take the following precautions.

a) In general all wires are considered live until proven otherwise.

b) Care shall be exercised to prevent short-circuiting, generating a spark or ignition source when working on or near the battery.

c) Employees shall wear the appropriate PPE for the hazard.

d) If electrolyte is spilled on clothing, the contaminated clothing shall be removed and the skin washed with water as soon as possible.

e) When using a hydrometer to check batteries, care shall be taken to prevent splashing or spilling battery acid.

f) Use the proper tools for electrical contact.

g) If possible ensure the main breaker is off. If there are in-line secondary breakers, make sure they are also off.

h) After the breaker is off, use a volt meter tester to ensure there is no current.

i) Batteries can hold a static charge, ensure it is properly grounded or when testing the current make sure there is no existing charge.

j) Ensure all cables exposed to current are properly insulated.

k) When installing battery leads, ensure you follow the process as it is outlined in the manual.

l) In general batteries are very heavy take care when lifting them.

15.5. Capstan Hoist Operations

A Capstan Hoist is a piece of equipment used in conjunction with synthetic rope to lift light loads vertically up a structure. A Capstan Hoist has a drive mechanism, usually a hydraulic or electric motor connected to a round drum through gears that provide a mechanical advantage. The rope is then wrapped around the drum to create friction and as the drum turns it lifts loads.

a) When using a Capstan Hoist there are many things to consider. As part of the inspection the electrical control system shall be physically tested before operations start.

b) The complete unit shall be inspected daily before use.

c) All electrical units shall be powered by the proper power source of at least 15 amps.

d) All extension cords shall be a minimum #12 wire and no longer than 50 feet to prevent electrical loss to the motor.

e) A permanent GFCI plug or a temporary GFCI shall be used with the unit.

f) There shall be an appropriate anchorage for the unit and that anchorage shall be tested before operations start. The anchorage shall use a safety factor of 2 for engineering calculations and 1.5:1 for physical load testing.

g) When installing the rope wraps on the drum the load side shall be on the inside of the drum closest to the motor. The pull side will be on the outside furthest away from the motor.

h) The rope wraps on the drum is a system based on friction so the; type of rope, number of wraps and the size of the rope are all important.

   i. The design of rope is usually either Double Braid or Dynamic Kernmantle.

   ii. The rope material is usually Polyester, never Polypropolyene.

   iii. The rope diameter size is limited to ½" to ¾"

i) The safety factor d for all synthetic ropes shall be 10:1 throughout its length including the knot.

j) The rigging components used shall have a safety factor of 5:1.

k) All blocks shall use a safety factor of 4:1.

l) The sheave diameter ratio to rope for Double Braid and Dynamic Kernmantle rope shall be 8:1.

m) The unit shall be properly aligned before operations start.

15.5.1. Truck Use for Overhead Lifting

When hoisting loads overhead with a synthetic rope only a Capstans Hoist designed for that purpose can be used.

When hoisting loads overhead with a synthetic rope the use of a truck for lifting or pulling is prohibited.

15.6. Chain Saws

Supervisors shall verify that operators are capable and qualified on each type of equipment before allowing the equipment to be operated unsupervised.

a) Operators shall perform a pre-operational check of equipment. Report all needed repairs promptly and do not use any equipment that is unsafe.

b) Wear appropriate personal protective equipment consistent with the hazard. This includes eye protection, gloves, chaps, safety boots, hard hats and hearing protection.

c) Ensure that the chain brake is functioning properly and adequately stops the chain.

d) The chain must be sharp, have the correct tension and be adequately lubricated.

e) Fueling must be done in a well-ventilated area and not while the saw is running or hot.

f) An approved container must be used to contain the fuel used along with a proper spout or funnel for pouring.

g) Saws shall be stored in carrying cases or the guard over the blade when not in use.

h) Saws shall be equipped with a chain brake and vibration dampening handles.

15.7. Concrete

a) Hazardous Data Sheets and the manufacturer's product information sheet should be accessed for additional detailed information.

b) Review Safe Operating Procedures for applicable equipment and perform pre-operational checks.

c) Be aware of loose materials, excavation drop-off, tripping hazards and other obstructions.

d) Wear long sleeve shirts, long pants, gloves and high top boots when working with fresh concrete to avoid burns.

e) Be alert to protruding nails, spikes or reinforcing bars in decks and rails.

f) Keep walk spaces and work areas free of loose materials or tools.

g) Dispose of salvage materials properly; use gloves and long-sleeved shirts when handling treated timbers.

h) Be aware of pinch points and crushing hazards.

15.7.1. Grouting Operations

a) Hazardous Material Data Sheets and the manufacturer's product information sheet should be accessed for additional detailed information.

b) Be sure to wear gloves when mixing and handling grout.

c) Be sure to have plenty of water to wash your hands and tools.

15.8. Cranes

All cranes shall be in good operational condition and operated by individuals qualified by experience and training and be familiar with the unit they are operating.

15.8.1. Crane "Jib"

All individuals operating a jib crane shall be qualified by experience and training and be familiar with the unit they are operating.

a) Rated load capacities shall be visible by the operator and permanently attached to the jib and the hoist.

b) A competent person shall complete a general inspection of the jib and the surrounding area daily before use.

c) Any defects found during an inspection shall be documented and reported immediately. If the defect affects the safe operations of the unit, then repairs shall be completed before operations start.

d) A Competent person shall complete a documented monthly inspection of the unit and that documentation shall go in the units file.

e) A qualified person shall perform a thorough annual inspection on the crane. This inspection shall be documented and archived in the unit's folder.

f) No modifications or additions that may affect the capacity or safe operations of the equipment shall be made without the manufacturer's written approval.

g) All rigging operations shall be performed under the direction of a Competent Person.

h) All loads shall be in place and stable before the load is released and the rigging is removed.

i) When lifting loads the maximum radius of the unit shall not be exceeded and all lifts shall be started with the hoist line being straight from the horizontal. Never drag or skid loads, only straight picks are allowed.

j) The on/off switches of the hoist shall be legible.

15.8.2. Cranes "Overhead"

All individuals operating an overhead cranes shall be qualified by experience and training and be familiar with the unit they are operating.

a) Rated load capacities shall be visible by the operator and permanently attached to the jib and the hoist.

b) A competent person shall complete a general inspection of the unit and the surrounding area daily before use.

c) Any defects found during an inspection shall be documented and reported immediately. If the defect affects the safe operations of the unit, then repairs shall be completed before operations start.

d) A Competent person shall complete a documented monthly inspection of the unit and that documentation shall go in the units file.

e) A qualified person shall perform a thorough annual inspection on the crane. This inspection shall be documented and archived in the unit's folder.

f) No modifications or additions that may affect the capacity or safe operations of the equipment shall be made without the manufacturer's written approval.

g) Only Competent workers shall attach rigging from the load to the mechanical lifting equipment.

h) All loads shall be in place and stable before the load is released and the rigging is removed.

i) When lifting loads the maximum radius of the unit shall not be exceeded and all lifts shall be started with the hoist line being straight from the horizontal. Never drag or skid loads, only straight picks are allowed.

j) The on/off switches of the hoist shall be legible.

15.8.3. Cranes "Mobile and Boom Trucks"

All individuals operating a mobile crane or boom truck shall be qualified by experience and training and be familiar with the unit they are operating.

a) Rated load capacities, recommended operating speeds, special hazard warnings, and operating instructions shall be permanently attached to all equipment and visible to the operator.

b) The rated capacity stated on the load shall not be exceeded for any lift.

c) There shall be a log book that complies to the local regulations supplied with every unit.

d) The log book shall be kept up to date by the operator.

e) A competent person shall complete a documented inspection daily before use.

f) A copy of the documented daily inspection shall be sent to the applicable office monthly for archiving in the units file.

g) Any defects found during an inspection shall be documented and reported immediately. If the defect affects the safe operations of the unit, then repairs shall be completed before operations start.

h) A qualified person shall perform a thorough annual inspection on the crane. This inspection shall be documented and archived in the unit's folder.

i) No modifications or additions that may affect the capacity or safe operations of the equipment shall be made without the manufacturer's written approval.

j) The selection and replacement of wire rope shall be in accordance with manufacturer's recommendations.

k) There shall be at a minimum one 5 pound ABC fire extinguisher on the unit or a size and type specified by the manufacture.

l) Only competent workers shall attach rigging from the load to the mechanical lifting equipment.

m) All loads shall be in place and stable before the load is released and the rigging is removed.

n) All lift beams must be designed by a professional engineer and built to those specifications.

o) Outriggers shall be set up on mat assemblies or wood cribbing that is capable of supporting the cranes outriggers as governed by the soil conditions.

p) When lifting loads overhead, a plan shall be put in place to prevent workers from walking under loads.

q) If lifting loads over an employee's head is imperative to the operations, then a plan shall be put in place to ensure the worker is audibly warned the action is occurring.

r) During crane operations, no operator shall leave a hoisted load unattended.

s) The operator shall have a designated signal person, but take a stop signal from anyone.

t) During the pre-lift meeting, the operator and signal person shall ensure the proper signals are being used and understood by all parties as referenced in form CS-28.

   A signal person shall:

   i. Be the only worker designated to giving direction to the operator,

   ii. Use alternate communications such as radios when hand signals cannot be utilized,

   iii. If the operation is inside specified limits of power lines, then a designated signal person must be used.

   iv. Be used if the operator's view of the intended path of travel is obstructed.

u) Tag lines should be used whenever possible anytime a load is being lifted and particular care shall be taken when around power lines.

v) Cranes must be erected and dismantled as per manufactures specifications and instructions.

15.8.4. Crane Operator Qualification "Mobile and Boom Trucks"

a) All crane operators must possess a valid operating certification card for the type of equipment being operated. **Additionally, for those provinces, territories or jurisdiction where licensing is required, the crane operator must possess a current license valid within that jurisdiction.**

b) The operator must have documented training and experience indicating that the worker is trained in the safe operation of the unit to comply with (a) above.

c) No uncertified worker shall operate a crane unless the worker is being instructed in the operation of that unit and is being supervised by a qualified operator.

d) Operators shall be familiar with the operator's manual for the crane they are operating.

e) When a crane is required to lift in excess of 75% of its rated capacity a documented pre-lift meeting should be held.

15.8.5. Criteria for Lift Plans "Mobile and Boom Trucks"

A documented lift plan must be written for all Critical Lifts which include:

a) Lifts over occupied areas. (i.e., buildings, sidewalks, roadways, etc.)

b) If the crane boom is inside the specified limits of energized power lines. (20 ft.)

c) Lifts requiring the crane to be set up over underground building structures or transportation tunnels.

d) Lifts exceeding 75% of the crane rated capacity should also be included.

e) Lifts requiring two or more cranes.

f) Helicopter lifts.

g) Lifting personnel.

A Personnel Lift Plan is required for all operations that involve the use of a suspended personnel platform.

15.8.6. Personnel Lift Plans "Mobile and Boom Trucks"

Prior to lifting employees in a personnel platform the following shall be completed:

a) A Personnel Lift Plan shall be completed by the Competent Person on site. A separate form must be completed each time the conditions of the lift change, i.e., each set-up location of the crane, change in lift points, etc.

b) The equipment checklist and calculated total allowable weight of the suspended personnel platform under loaded conditions shall be completed.

c) The Competent Person shall inspect the suspended personnel platform prior to its use.

d) Employees shall only be lifted with the use of a **certified personnel basket**.

e) When lifting employees a positive acting device (anti-two blocking device) shall be used on all cranes to automatically stop the block before it contacts the boom.

f) The plan shall cover emergency rescue procedures and these procedures shall be communicated to all personnel involved in the lift.

15.8.7. Trial Lift "Mobile and Boom Trucks"

a) A trial lift meeting,

b) A trial lift of the test weight in the personnel platform,

c) A final inspection of all equipment, and

d) The trial lift shall be documented on the Personnel Lift Plan.

e) A trial lift meeting shall be held prior to the trial lift to discuss JHA associated with the lift. All Personnel are required to attend the meeting including:

   i. Equipment operator

   ii. Signal person(s)

   iii. Employee(s) to be lifted

   iv. Crew leader responsible for the lift

f) The meeting must be repeated whenever there is a change in any of the above personnel or conditions.

g) A trial lift of the unoccupied personnel platform, which has a test weight attached that is equal to the expected weight to be lifted, shall be made.

h) The platform shall begin at ground level and travel through the area that the actual lift would be.

i) The trial lift shall be conducted prior to placing personnel on the platform. The equipment operator shall determine that all systems, controls, and safety devices are operating properly.

j) The equipment operator shall also verify that the equipment may be operated to all lift points without going beyond 50 percent of the equipment's rated capacity (as determined from the capacity chart, based upon the units load chart.

k) The Competent Person shall conduct a final visual inspection of the equipment, rigging and personnel platform immediately after the trial lift to determine if the testing exposed any defects or adverse conditions. Any defects found during the inspections shall be corrected before hoisting personnel.

l) After the trial lift inspection, and just prior to hoisting personnel, the occupied platform shall be hoisted a few inches off the ground and inspected to ensure that it is secure and properly balanced.

15.8.8. Personnel Platform Design Criteria

All platforms shall be designed in accordance with the latest version of ASME B30.23.

a) The platform shall be designed by a registered professional engineer.

b) The platform shall be equipped with a guardrail system consisting of a top rail, intermediate rail and a lower barrier:

   i. Top rail shall be not less than 39 inches and not more than 42 inches.

   ii. The posts shall be no more than eight feet apart.

   iii. The lower barrier between the mid rail and floor shall be mesh or solid material.

   iv. If the lower barrier is mesh then shall be toe board and minimum of six inches.

c) There shall be grab rail around the entire perimeter extending out two inches except for the gate.

d) Access gates if installed shall swing inward or slide and must have a latch to lock.

e) The floor shall be slip resistant.

f) Shackles if used in the suspension system must have a means of locking the pin.

g) If slings are used for a suspension system, they must meet in a common link.

h) Platforms shall be used only for personnel, their tools and the necessary materials to complete the job.

i) All equipment and material shall be evenly distributed.

j) The platform shall have a documented inspection daily before use.

15.8.9. Platform Repairs

a) Any repairs or modifications to the platform shall be designed and approved by professional engineer and the repairs inspected by a qualified person prior to returning the platform to service.

b) After any repair or modification of the suspended personnel platform, the platform and rigging shall be proof-tested to 125 percent of the platforms rated capacity by holding the platform in suspension for 5 minutes.

c) The platform shall not be used for hoisting personnel until the proof-testing requirements are satisfied.

15.8.10. Working in the Vicinity of Overhead Power Lines “Mobile and Boom Trucks”

These requirements refer to work within twenty feet of the power lines. Before attempting work within this distance of power lines, Square B, LLC shall exhaust all other options to work outside the twenty feet margin, including consulting with the utility company as to any assistance they can provide to minimize or eliminate the hazard.

a) All power lines shall be treated as energized.

b) At a minimum all operations shall remain twenty feet or more away from power lines unless the exact voltage has been determined and all appropriate electrical precautions and prevention of electrocution practices are in place.

c) A pre-job briefing shall be held prior to each work shift to make sure all options to ensure safety are covered and that all personnel on site are informed as to the safety plan and understand how to comply with it.

d) Approach distances between work and overhead power lines shall be constantly monitored and measured by a competent person. Approach distances is defined as the distance within which equipment is moving to and from the work area and the power lines in order to perform work in progress.

e) A crane operator shall use a dedicated signal person anytime there is a possibility of operating inside the limits of approach.

f) To obtain the safest work environment, workers shall ensure cranes; boom trucks and load lines maintain the maximum clearances possible from the power line.

g) Employees shall exercise extreme caution when working near aerial lift devices, cranes, and other equipment that is operating near overhead power lines.

h) All effort shall be made to not store material under or beside a power line to eliminate the possibility of coming inside the limit of approach.

i) Loads being moved near overhead power lines shall never be guided by hand and synthetic tag lines shall be used to guide all loads.

j) In situations where a crane boom or equipment contacts a power line and cannot be immediately removed, the operator shall stay at the operators station unless they absolutely have to move due to a fire or other hazards, then they shall do so in a controlled manner.

k) **Limits of approach for power lines**

AC Voltage Range	Standard in Feet
zero to ,50,000 kV	10
50,001 to 200 kV	15
201 kV to 350 kV	20
351 kV to 500 kV	25
501 kV to 750 kV	35
751 kV to 1,000 kV	45

15.9. Electrical Safety

15.9.1. Hazard Analysis

Square B, LLC supervisors shall conduct a hazard analysis of the workplace to determine the hazards in the work area and shall ensure that employees are informed of all potential electrical hazards and are not exposed to energized parts during the various types of work.

15.9.2. Electrical Safety Training

All employees shall be provided basic safety training covering; working safely with electricity, recognition of electrical hazards, prevention of electrical shock and arc flash.

15.9.3. Employee Protection and Safe Work Practices

All employees shall follow these guidelines:

a) Site personnel shall consider static electricity, electromagnetic energy sources, conductive cables and equipment on sites when evaluating jobsite hazards and incorporate the necessary control measures in the daily JHAs.

b) All rooms or enclosures containing exposed live electrical parts shall have signs warning of the danger and forbidding entry by unauthorized persons.

c) All electrical equipment shall comply with the applicable ANSI electrical standard and be rated for the specific purpose for which it is intended.

d) Workers shall ensure all equipment has the appropriate warning signs posted.

e) All areas will be kept clear of obstructions and arranged to give authorized persons ready access.

f) Only qualified employees shall be permitted to work on, near, or with energized electricity.

g) Proper illumination shall be provided to allow for safe installation or maintenance of equipment.

h) All wires shall be treated as energized.

i) Employees shall be prohibited from working near any part of an electric power circuit that an employee could contact in the course of work, unless the employee is protected against shock by; de-energizing the circuit and grounding it or by guarding it effectively by insulation or other means. (lockout/tagout)

j) If workers come in contact with an energized component, power will be shut off immediately and if necessary, medical assistance be sought.

k) If a defective or unsafe condition is identified, steps must be taken immediately to protect the health and safety of all workers that may be at risk. All unsafe conditions must be corrected as soon as reasonably practicable or equipment must be disconnected and taken out of service.

l) Electrical panels shall not be left open or unattended except while actively being worked on. Personnel working on the panel shall not leave the area for any reason while the panel is unattended.

m) If it is not reasonably practicable to de-energize electrical equipment; then an employee trained in the safe work process shall perform the work and as part of the emergency plan in case of contact there shall be a worker on site trained in live conductor rescue, electrical shock first aid and be able to obtain medical treatment.

n) Utilize appropriate PPE that shall protect personnel from identified hazard(s). This may include hand, arm, face, flame resistant clothing and other upper body protection measures as applicable.

o) A Class C fire extinguisher must be available to workers working on or near energized high voltage electrical equipment.

p) There shall be no exposed panel blanks.

q) Only authorized personnel shall have access to panel boxes. Access to panel boxes is limited to authorized/qualified personnel only through locks, controlled zones, monitor, etc.

r) In the work area there shall be adequate ventilation for all workers.

s) Flammable materials shall not be stored or place near electrical equipment.

t) All electrical tools shall be properly grounded or have double insulated protective covering in good condition.

u) Electrical cords shall be visually inspected daily for proper connecters and for cuts. Damaged cords must be removed from service and tagged defective immediately.

v) All electrical sources and live wires shall be properly wired to comply with the local electrical and building codes in regards to protecting employees from electrical shock.

w) All dead or abandoned power supplies or equipment shall be disconnected and secured to prevent inadvertent energization.

x) Electrically operated equipment shall be de-energized before repair or adjustments are performed.

y) The table below indicates the limit of approach for cranes and all other workers or equipment.

AC Voltage Range	Standard in Feet
zero to ,50,000 kV	10
50,001 to 200 kV	15
201 kV to 350 kV	20
351 kV to 500 kV	25
501 kV to 750 kV	35
751 kV to 1,000 kV	45

15.9.4. Ground Fault Circuit Interrupters

a) GFCIs shall be provided for all outdoor power receptacle outlets (e.g., temporary wiring during construction).

b) GFCIs shall be provided for all areas having a moist or wet atmosphere where electrical equipment or portable electric tools may be used.

c) GFCIs shall be inspected daily before use.

15.10. Electrical Work Requirements DC Power

15.10.1. General Requirements

Prior to commencing any work activities associated with DC power electrical work, employees shall comply with the following requirements:

a) Utilize only qualified employees when performing DC power electrical hot work.

b) Employees performing work shall have experience in low voltage, high amperage electrical hot work.

c) Establish Flash Protection Boundaries (FPB)

d) Take an active role in eliminating and/or minimizing electrical hazards prior to starting any DC power electrical work.

e) Evaluate each cell site independently to determine specific energy isolation potential based on current site power configurations and any other pertinent data derived from the walk down audit findings. Reduce the hazards by installing temporary insulating barriers where appropriate to prevent accidental contact with exposed, energized electrical equipment (temporary barriers shall be installed by a qualified person).

f) Utilize appropriate PPE that shall protect personnel from identified hazard(s). This may include hand, arm, face and other upper body protection measures.

g) Utilize appropriate insulated hand tools specifically manufactured for performing electrical hot work.

h) Have a site-specific emergency action plan in place: including identification of electrical sources and emergency shut-down procedures.

i) Place a physical visible barrier at the FPB.

j) Ensure qualified crews working on DC power electrical work activities have at least two (2) employees present at all times. One (1) employee of the two (2) employees shall have received the equivalent of Level 1/CPR First-Aid training and be currently certified. The individual that has been appointed as the First-Aid provider/rescuer within the crew shall be identified on corresponding JHA, along with all applicable emergency phone numbers.

k) Ensure that adequately sized and compatible fire extinguisher is available at each DC power electrical work site.

l) Reduce the hazards by installing temporary insulating barriers where appropriate to prevent accidental contact with exposed, energized electrical equipment (temporary barriers shall be installed by a qualified person).

m) Utilize appropriate PPE that shall protect personnel from identified hazard(s). This may include hand, arm, face and other upper body protection measures.

n) Utilize appropriate hand tools specifically manufactured for performing electrical hot work.

Work shall not be performed on energized systems unless a specific plan is developed that outlines the scope, safety hazards, personal protective equipment requirements, and is approved by the Vice President prior to starting assigned work activities.

15.10.2. Personal Protective Equipment/Tools

All employees performing DC power electrical work activities shall comply with the following minimum Personal Protective Equipment (PPE) requirements:

a) Utilize hand tools and equipment that are manufactured to be non-conductive, conforming to (ASTM F-1505 and/or NFPA 70E).

b) While working within the FPB shall wear all PPE. Additional protective clothing in accordance with NFPA 70E is required if working on energized systems.

c) Remove all conductive material from their person (watches, jewelry, necklaces, etc.) prior to starting work.

d) In addition, when performing any DC power electrical hot work, employees shall utilize non-conductive floor mats and other physical barriers (per ASTM D-1048, F-479, 712) to prevent/minimize electrical shock.

e) Perform and document pre-work visual inspection of all PPE utilized.

15.10.3. Other Requirements

Prior to performance of any electrical hot work, employees shall:

a) Confirm that all alternate energy isolation possibilities and/or scheduling options for equipment/system de-energization have been considered.

b) Notify the crew leader prior to commencing any DC power electrical hot work.

c) Prior to starting any electrical work, ensure the area is dry, adequately illuminated and free of obstructions and/or debris that may become a hazard or interfere with work activities.

d) Ensure that other unrelated carrier/vendor workers in the immediate work vicinity (inside of shelter) are kept outside of shelter while any DC power electrical hot work is being performed.

e) Review the JHA with the entire crew to ensure that each employee is aware of all known hazards in the designated work area. All crewmembers must sign the JHA acknowledging their review prior to starting work. The signed JHA shall be maintained at the site until work is completed.

Any violations involving DC power electrical work activities may result in immediate removal of the employee(s) from the Project.

15.10.4. Electrical Processes

Employees shall follow these basic elements:

a) Lockout and tagging of conductors and parts of electrical equipment,

b) Safe procedures for de-energizing circuits and equipment,

c) Application of locks and tags,

d) Verification that the equipment has been de-energized,

e) Procedures for reenergizing the circuits or equipment,

f) Other electrically related information, which is necessary for employee safety.

15.11. Industrial Power, Electrical Utility Poles and Transmission Towers

Personnel are expressly forbidden to; work in close proximity to high power, climb electrical utility poles and transmission towers unless all of the following conditions are met:

a) Written permission has been obtained from the appropriate utility company authorizing employees to perform work on the pole or tower.

b) A written technical procedure is approved by the utility company specifying the exact task to be performed aloft and the process for that task.

c) Once the technical process and work procedures are provided by the utility company the process and procedure shall be reviewed and understood by all employees affected by the work.

d) A utility company representative shall be on site at all times as a dedicated observer to ensure the processes and procedures are understood and followed.

e) Only highly skilled, competent climbers who have demonstrated expertise in safe climbing practices shall be used for a climb.

f) The work process shall follow and comply with the local jurisdiction where the work is being performed.

g) Where live line work is performed on electrical equipment or lines, a minimum of two qualified employees shall be used to perform the work.

h) The Vice President shall give authorization for the project and be part of the planning

15.12. Electrical and Utility Underground Avoidance

The following methods and requirements shall be followed as outlined.

a) If excavation or trenching is included in Square B, LLC's scope of work, the crew leader shall review all available drawings to identify underground utilities. In addition, the crew leader/project manager shall contact the local underground utility identification service within the time required prior to excavation.

b) Depending on the scope of work, representatives from utility companies may be invited to a pre-job conference to review work schedules, plans, and utility location and to provide emergency contact information. Priority utilities such as gas, electric and telephone lines should be marked and color-coded on the construction drawing, then verified with utility company representatives.

c) Colors and symbols have been adopted by most utilities; consult your local service for utility identification. Note that not all utility companies subscribe to locating services. In these cases, each utility owner must be contacted and its method of locating must be understood and followed.

d) Utility companies generally will not locate on private property. The private property owner must be contacted and arrangement must be made to locate all private utilities.

The following are color-codes and symbols for marking underground facilities:

Color/Utility	Symbol	Facility
Blue/Water	W	Water
Orange/Communication CATV	FA	Fire Alarm
	TEL	Telephone
	R	Railroad
	TV	Television
Green/Sewer and Water Drainage	S	Sewer
	D	Storm Drain
Red/Electric	L	Street Lighting
	E	Electric
	T	Traffic Signal
Yellow/Gas Oil Steam	G	Gas
	Co. Name	Oil and Chemical
Pink/Temporary Survey		Survey-Markings
White		Proposed Excavation

e) Where utility markings run within 5 feet of the proposed excavation/boring, the utility shall be physically located by means of hand digging. For proposed excavations/borings that run a continuous parallel route, the utility shall be located every 500 feet. Before commencing an excavation operation, the employee must verify the location and depth of the utility lines by hand digging. All hand digging shall be performed with nonconductive hand tools.

f) If damage occurs to any line, immediately contact the affected utility company. Emergency telephone numbers for all utility companies shall be available at every work location. Follow the procedures outlined in the emergency notification listing.

g) Gas lines have the potential to be extremely serious and must be manually located, marked, and protected. If a gas line cannot be found by hand digging at the locate marks, contact the utility owner and request its assistance before equipment excavation begins in the area

h) Once exposed, utilities shall be braced, sheeted, or shored to eliminate damage to underground utilities. Always support underground utilities in trenches to minimize strain on the system.

15.13. Electromagnetic Energy (EME)

15.13.1. General Requirements

Square B, LLC employees with potential over-exposure to EME shall ensure they have gone through the EME training orientation and ensure the following good practice guidelines are followed and met:

a) Only authorized and trained employees shall be allowed access.

b) Obey all posted signs.

c) Assume all antennas are active.

d) As a rule of thumb employees should maintain a minimum 1 meter (3 feet) clearance from all antennas.

e) Do not stop in front of antennas.

f) Use personal RF monitors while working in areas where known potential overexposure may occur.

15.13.2. Training and Qualification Verification

a) All personnel entering an EME controlled area shall be trained in the measures that may reduce their potential exposure.

b) All personnel who will be required to wear protective equipment (RF Suits, etc) shall be trained in its proper use, inspection, and limitations.

c) All personnel with potential exposure to EME shall go through training.

d) If EME Exposure cannot be reduced to within the occupational exposure limits by following normal precautionary measures, a written plan shall be developed by a Competent Person.

   i. In the plan overexposure may be allowed when time averaging is used.

   ii. Personal monitors must be used.

15.13.3. Ionizing Radiation

Square B, LLC very seldom works in this environment and when it does a site specific plan shall be developed with the involvement of all levels of management and workers.

15.14. Excavating and Trenching

Square B, LLC employees shall ensure that:

a) All jobs involving excavations or trenching have been carefully planned, the proper permits and other documents are prepared, and a **competent person** is available on site during the excavation activities.

b) Protection from cave-in is provided for each trench and excavation more than 4 feet in depth

c) Surface hazards and spoil piles are at least 2 feet from the edge of the excavation.

d) Before disturbing the soil, all underground utilities must be located, marked and protected, supported, or removed.

e) Excavations and trenches are appropriately identified with signs, warnings, and barricades.

f) Barricades should be kept 6 feet from open edges of trenches and excavations.

g) Walkways, bridges, or ramps with standard guardrails are provided where employees or equipment are required to cross over excavations or trenches.

h) Surface obstacles, such as trees, rocks, and sidewalks, that may create a hazard for employees are removed or secured.

i) Employees are to wear warning vests or other high-visibility garments when exposed to public vehicular traffic.

j) Employees DO NOT stand or work under any loads handled by lifting or digging equipment.

k) A warning system is established when the operator of mobile equipment does not have a clear direct view of the edge of the excavation while the equipment is being operated adjacent to or near the excavation's edge.

l) Excavations having the potential of developing a **hazardous atmosphere** are also classified as a confined space.

m) Areas that may contain **hazardous atmospheres** are tested and all hazardous atmospheres eliminated before entry.

n) Rescue equipment is readily available where **hazardous atmospheres** exist or could reasonably be expected to develop during work in an excavation.

o) Adequate and appropriate protection is provided before anyone works in an excavation where **water** accumulates.

p) Adjacent structures are shored, braced, or underpinned when their **stability** may be endangered by the excavation operations.

q) Protection is provided from loose rock or soil that could fall or roll from the excavation.

15.14.1. Excavation/Trenching Plan

a) An excavation **plan** is required for excavations and trenches that are 4 feet, whether operations performed by hand or by equipment.

b) A safe means of access and egress such as a ladder or ramp shall be provided for workers entering and exiting an excavation.

c) The Competent Person prior to the commencement of any excavation or trenching activities must complete a documented excavation plan.

d) A competent person must be identified on the plan.

e) The crew leader must keep a copy of the completed plan on site with the soils report.

15.14.2. Competent Person

“Competent person” means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

The Competent Person shall:

a) Conduct a JHA with all employees on the site and cover at a minimum:
   i. For overhead utilities,
   ii. For underground utilities,
   iii. Discuss limits of approach
   iv. Confirm the type of soil,
   v. Alert everyone to watch for the water table,
   vi. Ensure that any structure near the digging is not affected,
   vii. Is any traffic control necessary,
   viii. The type of barricades necessary
   ix. Are any lights necessary and
   x. The plan for trench support if employees are entering the trench.

b) Conduct daily inspections of excavations, adjacent areas, and protective systems for evidence of situations that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions prior to the start of each shift and as needed throughout the shift.

c) Inspect after every rainstorm or other occurrence that could increase the hazards

d) Remove employees from the excavation or trench if any hazards exist

15.14.3. Soil Classification

It is important that supervisors understand and recognize the different types of soil:

Stable rock	Natural solid mineral material that can be excavated with vertical sides and shall remain intact while exposed.
Type A soil	Examples include clay, silty clay, sandy clay, clay loam, and sometimes, silty clay loam and sandy clay loam.
Type B soil	Examples include silt, silt loam, sandy loam and sometimes silty clay loam and sandy clay loam
Type C soil	Examples include granular soils like gravel, sand loamy sand, submerged soil, and soil from which water is freely seeping, and submerged rock that is not stable.

15.14.4.

15.14.5. Determination of Protection System

Square B, LLC shall not allow their employees to enter an excavation unless an adequate protective system is in place.

a) Sloping

Soil or Rock Type	Maximum allowable slope (H:V)(1) for excavations less than 20 feet from the horizontal
Stable rock	Vertical (90 degrees)
Type A	¾:1 (53 degrees)
Type B	1:1 (45 degrees)
Type C	1 ½ : 1 (34 degrees)

Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

b) Benching

c) Shoring systems

d) Shielding systems

15.14.6. Design

The determination and design of a protective system shall be based on careful consideration of the following:

a) Depth of the cut;

b) Anticipated changes in the soil due to air, sun, and water; ground movement caused by vehicle vibration or blasting;

c) Soil classification and earth pressures.

15.14.7. Trench Shields

a) Trench shields or trench boxes shall be capable of withstanding forces generated by a cave-in. They can be portable or permanent.

b) Trench shields or boxes shall be used and maintained in accordance with the manufacturer's requirements and in a manner that shall prevent employee exposure to hazards.

c) Predictable failures such as sliding, falling, or kickout shall be prevented by properly securing connections.

d) Systems shall be installed and removed to protect employees from cave-ins, structural failures, or being struck by the trench system members.

e) Backfilling and disassembly shall progress from the bottom to the top and shall progress with the removal of the systems from the excavation.

f) Excavation of material to a level no greater than 2 feet below the bottom of the support members shall be permitted. This level shall be permitted if the system has been designed to this excavated trench depth and there is no loss of material from behind the support system.

g) Trenches left open overnight shall be covered or properly barricaded.

15.14.8. Barricades General

Employees shall heed warning signs.

a) Where hazardous conditions exist; warning signs, barriers and barricades shall be used to warn employees and the public of the dangers.

b) When hazardous conditions exist in poorly illuminated areas or after dark, adequate lighting shall be provided and flashing warning lights shall be placed on all sides of the hazardous area.

c) Warning barricades alert personnel to the existence of the hazard but afford no physical protection from the hazard. Typically, yellow “CAUTION” tape, orange “snow fence,” or ropes with signs are used as warning barricades.

d) Signs or tags shall be used to provide personnel with important safety information concerning the hazards inside any barricaded area. The signs or tags must be attached so they can be read from all potential access points. Lighting shall be provided to illuminate all entry areas when the condition warrants.

e) All barricades should be approximately 42 inches in height. Barricade tape should be tied to vertical support posts.

f) The hazard area shall be entirely isolated by the barricade. A permanent structure that prevents entry into the hazard area may be used as part of the barricade. The barricaded area shall be of sufficient size to afford adequate protection.

g) Barricades should not block emergency equipment, such as fire extinguishers, safety showers, power panels, etc.

h) Barricade gates, when required, must remain closed when personnel or material are not passing through.

15.14.9. Warning Barricades

a) Warning barricades are generally “CAUTION” barrier tape. Personnel may go through these areas with caution after the hazard has been recognized.

b) High hazard areas shall be barricaded using appropriate “DANGER” barrier tape. Only personnel assigned to the work in the hazard area shall be permitted inside this barricade. Entry by other personnel is prohibited.

c) The area immediately beneath any overhead work area shall be considered a high hazard area. “Danger” tape shall be used to control entry into these work areas, i.e. high probability of falling objects.

d) Where the superstructure of equipment is capable of rotating, the area may be defined as a hazard area and shall be barricaded accordingly.

15.14.10. Protective Barricades

a) Examples of hazards requiring protective barricades are; trenches, drilled caissons, openings in grating or platforms, or any other exposure where personnel may fall to a lower level.

b) Protective barricades provide physical exclusion from the hazard area in addition to providing a warning. Protective barricades are often made from wood 2-by-4’s, but could consist of sawhorses, tube-loc scaffold components or other suitable material. Protective barricades must be capable of supporting 55 pounds per square foot of static load in any direction.

c) The top rail of a protective barricade should be made from 2-by-4 lumber or 1-1/2-in. metal handrail material, so arranged that the top rail is 42 inches from the ground, floor or platform level. A mid-rail made from 2-by-4 lumber or metal handrail material must be located at the midpoint between top rail and the ground, floor or platform level. A toe plate 4 inches in height must be used on all barricades for floor holes, floor openings or wall openings. It shall be made from 1-by-4 or 2-by-4 lumber and shall be installed to prevent tools or material from falling to the lower level.

d) Vertical support posts must be 2-by-4 lumber or 1-1/2-in. metal or larger and located at distances not to exceed 8 feet.

15.14.11. Road Barricades

Barricades across or next to a roadway shall be protective barricades. Square B, LLC shall be responsible to ensure that:

a) Wooden barricades with appropriate signs or equivalent flashing lights are erected and in good working order.

b) All barricade systems installed in public and/or private roadways are documented in a written traffic control plan, submitted to and approved by the controlling roadway authority:

c) Appropriate amber flashing lights are attached to all barricades in place after dark to alert vehicle traffic of their presence.

d) Written traffic control plans are available at each work site. Square B, LLC must have written documentation demonstrating all affected employees have been adequately trained on the approved written traffic control plan for that work area.

15.15. Exothermic Welding (Cad-weld)

At Square B, LLC the cad-welding process is used for connecting copper grounding materials together with only small amounts of premeasured cadmium being used for each connection and the connections are always completed outside in the fresh air which creates little or no exposure to the worker.

It would be a rare occasion for Square B, LLC to handle any volume of this material and on those situations a job procedure will be written do address the hazards for each particular situation.

Square B, LLC employees shall ensure that exothermic operations are conducted within the following guidelines.

a) Igniter materials shall be stored in an approved container and kept away from extreme heat, sparks, and moisture.

b) When using igniter material, do not look directly into the “flash” as it could cause temporary blindness.

c) Leather gloves and safety glasses shall be used to help prevent contact burns.

d) The use of an extension tool is recommended and if not available, a long sleeve shirt should be worn to prevent burns to the arms.

e) Avoid moisture and contaminants in the mold and materials being welded. Contact of molten weld metal with moisture or contaminants may cause weld metal to spew out of mold or explode.

f) The proper way to rid a mold of moisture is to slowly heat it with a torch.

g) Never use mud, or other materials to stop leakage from a mold. Only factory approved sealers shall be used. Mold leakage is a good indication the mold is worn and may need to be replaced.

h) Do not use worn or broken molds. Do not alter molds or accessories.

i) The flint igniter is the only recommended method to start a reaction. Never use a match or open flame to start a reaction. **Serious burns may result.**

j) Only weld items the mold is designed for as defined by the manufacturer.

k) Make sure that the material being welded fits in the mold properly and that the mold shall close tightly around them.

l) Avoid breathing concentrations of smoke, as it may be hazardous.

m) This material burns at approximately 6,000 degrees therefore all precautionary measures should be taken when handling this material.

n) When welding to pipe or vessels, consider the effect welding may have on structural members and thin wall pipe or vessels

15.16. Explosives

Only those persons who are trained and certified shall; handle, use, transport, direct or conduct blasting operations.

15.17. Fiber Optics

This section describes the general safety precautions that should be adhered to while working with Fiber optics. The main hazards of working with fiber optics are; broken glass, visible and invisible light along with the chemicals used for cleaning and preparing the fibers.

15.17.1. Broken Fibers

a) Always use eye protection for broken glass and chemicals.

b) Always use cut resistant gloves for both the broken glass and the sharp tools used for preparing the tubes.

c) Work in a clean area to limit the chances of misplacing cut or broken fiber ends.

d) The broken fibers may stick to your gloves; avoid contact with your mouth or eyes.

e) When your task is complete clean your work area thoroughly and put any cut or broken fibers into a sealed container.

15.17.2. Visible and Invisible Light

When working with fiber optic cables and equipment, always assume there is light in the cable until tested to prove otherwise.

a) If there is a need to expose your eyes to the light source, then the proper light blocking glasses for the application must be worn.

b) As a precaution always cap fiber ends with non-clear caps.

c) Never look directly into the end of a fiber with the bare eye if there is a possibility of the fiber carrying a laser light. Laser light can be invisible and seriously damage your eyes.

d) To determine if a source has light present use a power meter and/or a ruby red to confirm the source is off or the fiber has been disconnected.

e) To inspect the end of fiber, use only a digital scope on a system that may become live. Only use a manual scope on fiber jumpers.

15.17.3. Chemicals

Caution must be used with the chemicals associated with the fiber optic process; refer to the applicable MSDS sheets for the chemicals you are using.

15.18. Fire Arms

Square B, LLC prohibits any type of fire arms on company property which includes; our property leased or owned, any vehicle used for business purposes and the customers property.
From time to time there may be exceptions to the rule and in those situations you must have written authorization from management. One situation would be remote areas where aggressive wildlife is a probability. In those situations where you must carry a firearm the following rules will be followed:

a) Ensure the firearm is of the non-restricted type according to American laws.

b) Abide by all Federal, State or local laws pertaining to “No Shooting” zones.

c) The individual using the firearm shall be in possession of a current and valid Acquisition License (PAL).

d) During transportation the firearm shall; have no ammunition in the fire arm, follow all American laws including a trigger lock or a cable lock and only use prescribed ammunition.

15.19. Fire Protection

For each place of employment there shall be an emergency fire plan and the fire protection program shall consist of the following:

a) Provisions shall be made for the separate storage of flammable materials in containers that meet regulatory requirements.

b) Employee training in the proper use of fire extinguishers.

c) There shall be an individual trained and responsible for the plan and the plan must include at a minimum one fire drill a year.

d) The work area shall always be kept clean and tidy of flammable material.

e) Appropriate fire-fighting equipment shall be immediately available in the work area and in vehicles. The fire extinguisher will be a minimum of 5lb ABC, and shall be maintained in a state of readiness.

f) No welding, cutting, or heating shall be done where the application of flammable paints or the presence of other flammable compounds, or heavy dust concentrations creates a hazard.

g) The applicable type and size of fire extinguisher shall be available for the type of work being performed.

h) Fire extinguishers shall be inspected monthly by a competent person, their location shall be conspicuously marked and there shall be clear access to each location.

i) Each fire extinguisher shall be replaced immediately after discharge with another fire extinguisher that is fully charged and of the proper size and type.

j) Garbage that may constitute a fire hazard shall be placed in a suitable covered container.

k) Smoking shall be prohibited at or near operations, which constitute a fire hazard.

l) Only approved containers and portable tanks shall be used for the storage and handling of flammable and combustible liquids.

m) Flammable or combustible liquids shall not be stored in areas used for exits or stairways, or normally used for the safe passage of people.

n) If normal fire prevention methods are not sufficient to adequately ensure the prevention of fires, additional personnel shall be added (fire watch) to guard against potential fires. Fire watches shall be trained and remain at the location a minimum of 30 minutes after work is stopped to ensure that no possibility of fire exists.

o) Fire extinguishers are rated A, B, C, and D. Almost all extinguishers are a combination of A, B, C and the ratings are important, they refer to the type of fire the extinguisher is designed to fight. The ratings mean:

   i. A is for ordinary materials such as paper, cloth, wood, rubber,

   ii. B is for flammable fluids, gases, oil,

   iii. C is for electrical fires on electrical equipment,

   iv. D is for exotic metals such as magnesium, titanium, sodium.

15.20. Flammable and Combustible Materials

a) Approved, properly labeled, storage cabinets shall be supplied for the storage of flammable liquids in quantities exceeding 50 liters.

b) Flammable and combustible liquids shall not be stored in areas used as exits, stairways, or passageways, and shall not adversely affect the means of egress.

c) A sign “Danger-No Smoking”, “No Open Flames” or “Ignition Source” shall be posted in rooms or at entrances to areas where combustible materials are stored or used.

d) Smoking is prohibited where refueling activities are in progress. Clear and legible signs shall be posted.

e) Combustible liquids, including oil or grease, shall be stored in containers or storage tanks labeled with contents and tank capacity. Each tank shall be:

   i. Capable of withstanding working pressures and stresses compatible with the type of liquid stored,

   ii. Maintained in a manner that prevents leakage,

   iii. Located in an area free of combustible materials, and

   iv. Vented or otherwise constructed to prevent development of pressures or vacuum as a result of filling, emptying, or atmospheric temperature changes.

f) An appropriate number of approved fire extinguishers shall be readily available.

g) In reference to static charge, care shall be taken while fueling equipment or transferring fuel from one container to another. When using metal containers to transfer fuel a method to electrically ground the two containers shall be used.

h) Gasoline shall not be used as a cleaning agent

i) Gasoline shall not be used to start fires.

j) If it is not practical to maintain the airborne concentration of a flammable gas or vapor below the applicable exposure limit, only the minimum number of workers necessary for the work may be exposed and the concentration of the flammable gas or vapor must not exceed twenty percent of the lower exposure limit.

15.21. Floor and Wall Openings

15.21.1. General Requirements

a) When it is necessary to create a floor hole or floor/wall opening, the crew leader shall implement the necessary safeguards to protect the employees and public.

b) All floor and wall openings shall be adequately covered and appropriately marked in the following manner: "FLOOR OPENING – DANGER, DO NOT REMOVE."

c) The use of caution/danger tape is not a barricade system around holes/openings and is prohibited.

d) No material shall be stored on any floor covers. (This will minimize the potential for overloading).

e) Every floor hole into which employees can accidentally walk shall be guarded by a standard railing with standard toe boards on all exposed sides, or a floor hole cover of standard strength and construction.

15.21.2. Temporary Flooring

a) When a floor opening exceeds 40 inches at its narrowest dimension, it will require temporary flooring of sufficient strength for the anticipated loads.

b) Temporary flooring shall be covered with 3/4-inch exterior-grade plywood or the equivalent. In addition, these covers shall be secured to prevent them from slipping or being displaced by personnel traffic.

c) Temporary flooring can be solid 2 inch lumber positively secured to prevent displacement from personnel traffic.

d) Floor hole-covers for a circular floor hole can be made in a circular, square, or rectangular shape. Floor-hole covers shall extend a minimum of 4 inches from the edge of the entire hole being covered.

15.22. Fork lifts

All individuals operating a fork lift shall be qualified by experience and training with Provincial certification to operate the applicable unit

a) Shall ensure only employees with valid training operate forklifts.

b) Verify that operators are properly trained and qualified on each type of equipment before allowing the equipment to be operated unsupervised.

c) In situations where the operation exposes the unit to the public highway, then that person must have a valid motor vehicle license that complies with the Square B, LLC HSE policy manual.

15.22.1. Operators:

a) Perform a pre-operational check of their equipment.

b) Be familiar with the operator's manual.

c) Report needed repairs promptly.

d) Do not use any equipment that is unsafe.

e) Ensure rated capacity is stated on forklift. Do not overload.

f) Ensure riders are not permitted on forklifts during the lifting and carrying of loads.

g) Ensure loads are safe and secure.

h) Ensure forks are always carried as low as possible.

i) Ensure trailers are securely blocked; brakes set and dock plate in place before forklifts are driven in and out of trailers at loading docks.

j) Employees shall not be allowed to stand or work under the elevated portion of any forklift.

k) Employees shall only be lifted in forklifts or on forklift platforms designed and approved specifically for this use.

l) Approved fall protection shall be used by all personnel while working above 6 foot in an elevated platform.

m) The forklift operator shall never leave the lift while an occupied work platform/basket is elevated.

n) (If the forklift has a seat belt, it must be worn.) All forklifts equipped with rollover protection must be equipped with seatbelts. These seatbelts must be worn while operating the forklift.

o) In areas where there is a danger of objects falling the equipment operator shall be protected by an overhead cab or guard.

15.23. Generators

a) Do not make or break electrical receptacle connections under load.

b) Use only grounded receptacles and extension cords.

c) Generator must be properly grounded.

d) Ensure the GFCI on the generator is working each day of use.

e) Be extremely careful operating in wet weather.

f) Guard against electric shock; do not touch live terminals or receptacles.

g) Operators should be alert for hot and moving parts.

h) Do not fill fuel tank or remove the fuel cap while the engine is running.

i) Keep a fire extinguisher near the generator.

j) When transporting, ensure that the generator is properly secured.

15.24. Gin Poles

All Square B, LLC gin poles and there use shall comply with the TIA 1019-A-2011 gin pole design and use standard.

15.24.1. General Requirements

a) The TIA standard is developed for steel poles used in the vertical or near vertical position.

b) The information on a load chart must comply with the standard and at a minimum have:

   i. Identification number that matches a load chart,

   ii. Gin Pole overall description,

   iii. Overall length,

   iv. The class of the pole,

   v. Lifting capacities based on Gross load,

   vi. Gin Pole supported to the structure at a minimum the cantilever and basket positions,

   vii. Minimum load line angle of three degrees,

   viii. Reaction forces for the attachment points

c) If a track is used on a pole, then the track will not act as bridle slings unless specified by the engineer.

15.24.2. Wind Loading

a) Gin Pole load charts are designed for a steady 30 mph wind load on cantilever portion of the pole, if working in winds greater than 30 mph, then the applicable reduction to the load chart shall be considered.

15.24.3. Gin Pole Assembly

a) The gin pole must be labeled and that label must match a specific load chart.

b) The sections shall be marked for a specific assembly order.

c) The sections shall be marked for rotation so the pole can be assembled the same way every time.

15.24.4. Connection Bolts

a) All connection bolts shall be as specified by the engineer.

b) Re-use of bolts is allowed under specific circumstances:

   i. They must be black iron; A325 or A449 or approved by an engineer.

   ii. Galvanized bolts can only be used once,

   iii. All reused bolts shall be thread tested before each installation,

   iv. Only bolts ¾ inch or greater can be re-used.

c) In bearing type connection bolts need only be tighten to the snug-tight condition.

15.24.5. Lifting Personnel

a) The load chart shall be reduced by one half.

b) The lifting line shall be a minimum size of 3/8 inch diameter and have safety factor of 10:1..

15.24.6. Rigging Specific to a Gin Pole

a) All components shall have a nominal Breaking Strength of five times the static load.

b) All wire rope shall have a steel core.

c) The blocks and sheaves shall be the appropriate size to match the wire rope and if not the proper size, then the appropriate reduction shall be taken into account.

d) The blocks and sheaves used in the system will have an 18:1 ratio to the load line size or the applicable deductions will be made.

e) The end connections to the hoist load and jump lines shall be completed by a Competent Person and the proper reductions taken into account. If a Flemish eye with a clip is used, then a heavy duty thimble must be used.

f) Basket slings on the pole shall have thimbles in the eyes.

g) If chains are used they must be alloy chains rated for lifting and must be so labeled with a 8, T or A.

h) Only quenched and tempered hooks and shackles shall be used with their load rating stamped on the item.

15.24.7. Special Engineered Lift

a) Any lift that falls outside the limits of a Gin Pole load chart shall not be completed.

b) Lifts outside the load chart shall only be completed under the direction of a qualified engineer.

c) If a gin pole is used in any other position than vertical, then it must have a special load chart for that applicable position designed and stamped by a qualified engineer.

15.24.8. Inspection

a) A documented annual inspection shall be completed by a qualified person. The documentation shall be placed in the office gin pole folder.

b) A documented inspection shall be completed on the assembled pole before each job. The documentation shall be placed in the office gin pole folder.

c) A documented inspection of all rigging shall be completed daily before use.

d) Inspection guidelines:

   i. All structural members shall be straight to within 1/500.

   ii. The assembled pole shall be straight to within 1/500.

   iii. A visual inspection shall include: rust, pitting, cracks, etc.

15.24.9. Repair and Modification

a) All modification and repairs shall be completed with similar or like material to meet the original design.

b) All repairs shall be made by a qualified welder and qualify to the ANSI W59/47.1.

15.25. Helicopters

a) Helicopter cranes shall comply with all applicable regulations and standards.

b) Prior to each day's operation a briefing shall be conducted. This briefing shall set forth the plan of operation for the pilot and ground personnel.

c) Tag lines shall be of a length that will not permit their being drawn up into rotors.

d) Employees working in down wash shall wear complete eye protection (mono-goggles), and hardhat secured with chinstrap. Loose fitting clothing shall not be worn.

e) All loose gear within 100 feet of lifting a load, depositing a load or any other area subjected to down wash shall be secured or removed.

f) Good housekeeping shall be maintained in all helicopter loading and unloading areas.

g) Only the helicopter operator shall determine the size, weight, and manner in which loads are connected to the helicopter.

h) If, for any reason, the helicopter operator determines a lift cannot be made safely, the lift shall not be made.

i) Employees shall not perform work under hovering craft except when necessary to hook or unhook loads.

j) Static charge on the suspended load shall be dissipated with a grounding device before ground personnel touch the suspended load, or protective rubber gloves shall be worn by all ground personnel touching the suspended load.

k) No unauthorized person shall be allowed to approach within 50 feet of the helicopter when the rotor blades are turning.

l) Whenever approaching or leaving a helicopter with blades rotating, all employees shall remain in full view of the pilot and keep in a crouched position.

m) Employees shall avoid the area from the cockpit or cabin rearward unless authorized by the helicopter operator to work there.

n) There shall be constant reliable communications between the pilot, and a designated employee of the ground crew who acts as a signalman during the period of loading and unloading. This signalman shall be distinctly recognizable from other ground personnel.

15.26. Hoist Base Mounted for Hoisting Personnel

All base mounted hoists used for hoisting employees shall comply with the criteria mandated in the NATE standard for lifting personnel.

15.26.1. General Requirements

a) The hoist shall be designed per the requirements of the NATE standard and manufacturer specifications.

b) All exposed hazards shall be guarded.

c) The drum shall have a means of positively connecting the wire rope.

d) The winch drum and blocks shall maintain and 18:1 ratio of pitch diameter to wire rope size or apply the applicable deductions.

e) During operations the drum flange shall be 15 mm higher than the wire rope wraps.

f) The hoist shall have a primary brake and an emergency secondary both capable of holding 125 percent of the lifting capacity

g) There shall be a means within easy reach of the operations center to start and stop the machine. The means shall be clearly marked.

h) All controls shall be within easy reach from the operations center.

i) All control levers when released shall return to neutral.

j) All control levers shall be visibly marked and identified.

k) A 5 pound ABC fire extinguisher shall be available at the operations station.

l) Rated load capacities, recommended operating speeds and special hazard warnings, or instruction shall be conspicuously posted on the hoist.

m) The hoist shall be anchor to resist two times the intended load for the job and so anchored to prevent twisting and turning.

n) During the daily inspection, the operator shall trial move all control levers to ensure that when operations start, the unit will operate properly.

o) The operator must ensure that during startup inspection, no workers are exposed to a hazard during that process.

15.26.2. Repair and Modification

a) All repairs shall be completed under the supervision of a qualified person.

b) All repaired hoists shall be line pull tested and their performance checked.

c) All modification documents shall be archived.

15.26.3. Inspection and Maintenance

a) The hoist shall be inspected in accordance to the manufacture specification and if those are not available, then the NATE standard.

b) All inspection and maintenance shall be documented.

c) A copy of the inspection form shall be sent to the applicable office once a month and archived.

d) If during the inspection, defective items are found and would affect the performance of the unit, and then those items will be repaired before operations continue.

e) The unit shall have a means of measuring the winch assembly operating time to comply with the inspection criteria.

f) The daily inspection of the hoist and the notation on when it is not being used is very important to prevent more frequent teardown inspections. The inspection criteria is as follows:

   i. Severe duty three years,

   ii. Moderate duty five years,

   iii. Infrequent use every seven years,

   iv. No inspection documentation, every three years.

15.26.4. Operator Qualification

a) The operator shall have proof of training through class room and experience.

b) The operator shall have adequate hearing and eye sight for the operation.

c) The operator shall never engage in any operations if they are not physically or mentally fit.

d) During operations, no operator shall leave a hoisted load unattended unless the load has been immobilized and secured against accidental movement or enclosed by a safeguard to prevent unauthorized access to the load.

e) The operator shall have a designated signal person, but take a stop signal from anyone.

f) A signal person shall:

   i. Be the only worker designated to giving direction to the operator,

   ii. Use alternate communications such as radios when hand signals cannot be utilized,

   iii. If the operation is inside specified limits of power lines, then a designated signal person must be used at all times.

g) Tag lines should be used whenever possible anytime a load is being lifted and particular care shall be taken when around power lines.

15.26.5. Specifics for Personnel Riding the Hoist Load Line

Square B, LLC allows riding the line under very strict control and processes with a documented plan filled out and in place for each job.

a) The plan must be based on and comply with National Association of Tower Erectors (NATE) standard "Base Mounted Hoist Mechanisms Design and Use Standard for Lifting Personnel While Working on Telecommunication Structures".

b) The hoist being used must be designed for lifting personnel.

c) The hoist must be inspected and maintained per the standard.

d) The operator must be qualified by experience or have certification of training.

e) When lifting personnel the operator must de-rate the load chart by half.

f) When lifting personnel all rigging and wire rope shall have a safety factor of 10:1.

g) The pre-lift as specified in the crane section must be followed.

h) Exceptions to the NATE standard are:

   i. The lift must be made with a personnel basket anytime employees are being hoisted,

   ii. An onsite document procedure may be used to prevent two-blocking, instead of the use of an anti-two block mechanism.

Persons observed riding a hoist line without written permission shall be removed from the project immediately. Disciplinary action will be taken towards any employee and crew that are found in violation of this policy.

15.27. Housekeeping

Slips, trips, and falls account for many incidents in the workplace, that in most cases are easily preventable by following some basic precautions and safe work practices. Housekeeping is a fundamental and necessary activity that is required by every employee working on a project. Clean and tidy work areas hold fewer hazards for all employees. Incidents and injuries can be avoided and productivity improved where good housekeeping is a daily occurrence. All supervisors are required to enforce and monitor work areas routinely for the following:

a) Work areas, passageways, stairways, and all other areas are kept free of debris, equipment, and materials. All doors will open outwards.

b) Appropriate trash containers are strategically placed and used for disposal of scrap materials and other generated debris.

c) Liquids (such as paints, solvents, thinners, oils, and greases) and any other material or containers, which have contained chemicals, are disposed of in accordance with the hazardous waste procedures and regulatory requirements.

d) Construction areas shall be cleaned and arranged by safe means on a daily basis to preclude the creation of tripping, slipping, and fire hazards.

e) Materials are stored or placed in an orderly manner.

f) Electric welding leads, cords, wires, electrical cables, hoses, and other temporary systems shall be laid in an organized manner.

g) All scrap lumber, waste material, and rubbish is removed from the immediate work area as the work progresses.

h) All restricted areas shall be locked.

i) All solvent waste, oily rags and flammable liquids are kept in fire-resistant covered containers until removed from the worksite. These materials must not be stored near electrical equipment.

j) Keep floors clean; dry (dry as possible); slip-resistant; and free of waste, unnecessary material, oil and grease, protruding nails, splinters, holes, or loose boards. Means shall be available for the containment of material spills. Spills shall be cleaned up by individuals trained to handle the material, and shall be done promptly and disposed of properly. (Consult the MSDS for proper handling instructions.)

15.28. Illumination / Lighting

The competent person should plan work as far as practicable to limit the need for **night work**. When night work is required the competent person shall ensure:

a) All necessary precautions have been implemented.

b) Instructions are given in regard to the movement of vehicles and equipment within the areas of work.

c) Adequate barriers are provided around areas where hazards may exist, and that such hazards are clearly lit.

d) Lighting provided is adequate and that personnel are not working in the shadows.

e) JHAs and risk assessments have been completed as required by the nature of the work.

f) The necessary tools and equipment are provided.

g) The climbing ladder and work area are properly lit.

15.28.1. Area Lighting

The following general requirements for area lighting shall be followed:

a) All points of exit, pathways, and staging area shall be clearly illuminated and marked.

b) Ladder access and egress shall be clearly illuminated.

c) Tower lighting shall be located in a manner that illuminates all work areas.

d) If lighting is necessary in confined spaces then back-up lighting shall be provided in case of power failure.

e) Lighting poles and other metal poles shall be earthed (grounded) and the circuit fitted with GFCIs.

f) Cables supporting temporary lighting shall be routed to ensure they do not present a hazard.

g) All lighting fixtures shall be installed in a secure manner to prevent accidental movement or falling.

h) Metal-case sockets shall be grounded.

15.28.2. Portable Lighting

When portable lighting is being used the following requirements shall be followed:

a) Only approved extension cords and fittings will be used.

b) All extension cords and fittings shall be properly maintained and shall have a grounding conductor.

c) The extension cord used to supply power for the lights shall not be used to supply power to other equipment unless the cord meets the proper requirements.

d) The cord shall be protected from physical and mechanical damage.

15.29. Ladders

15.29.1. General Requirements

a) A temporary ladder shall not be used if there is a permanent means of accessing a work platform.

b) If a ladder is not being held by another employee then the ladder shall have a means of being tied off to prevent the ladder from sliding sideways.

c) Job-made ladders are prohibited.

d) No ladders shall be lashed together to increase the length.

e) Ladders shall never be used in the horizontal position as scaffolds or as work platforms.

15.29.2. Ladder Specifications

a) Nonconductive Ladders shall be used on any site where there is a possibility of it coming in contact with electrical energy.

b) All ladders purchased shall comply with the applicable ANSI standard.

c) All ladders shall have non-slip feet.

15.29.3. Ladders Use

a) Ladders shall be visually inspected before they are used.

b) The access areas at the top and bottom of ladders in use shall be kept clear of obstructions.

c) Ladders shall be placed with secure footing, and they shall be lashed, or held in position.

d) Under certain conditions it may be necessary for another employee to hold the ladder to prevent falling or slipping.

e) The side rails of all ladders shall extend a minimum of three feet above the landing. The top three rungs may not be used for stepping or transitioning during the work effort.

f) A ladder should be positioned at a 4 to 1 ratio of the working length of the ladder. In cases where this is not possible then the ladder must be held or tied.

g) Employees shall always face the ladder when climbing up or down using both hands.

h) Short ladders shall not be spliced together to make longer ladders.

i) Ladders shall never be used in the horizontal position as scaffolds or work platforms.

j) The top two rungs shall not be used as a step or cleat.

k) Before climbing a stepladder, employees shall make sure spreaders are fully extended and locked.

l) While climbing, employees shall maintain 3-point contact Tools shall not be carried in the hand. They should be raised or lowered in a safe manner.

15.29.4. Inspection of Ladders

a) All ladders and their components shall be inspected daily before use.

b) Bends, dents, cracks, loose or missing rivets, disconnected braces, and corrosion can seriously weaken a ladder. The area around rivet points on fiberglass ladders shall be carefully inspected for hairline stress cracks.

c) Any defective ladder shall be tagged, destroyed or removed from use immediately.

15.29.5. Wooden Ladders

a) Ladders shall not be painted and only a transparent nonconductive protective coating can be used to preserve the ladder.

15.29.6. Step Ladders

a) The top two rungs shall not be used as a step or cleat.

b) Step ladder height shall be limited to 18 feet.

15.29.7. Extension Ladders

a) Single section ladders shall not exceed 29.5 feet.

b) Two section ladders shall not exceed 48 feet.

c) Multi section ladders shall not exceed 65 feet.

15.29.8. Trestle Ladder

a) The maximum length of the base section shall be 16 feet.

b) The maximum length for each extension shall be 15 feet.

c) There must be a means of securely locking the sections together.

15.29.9. Storing and Transporting of Ladders

a) Ladders being transported by motor vehicles shall be properly supported and secured. Supporting points shall be made of material such as wood or rubber-covered iron pipe to minimize chafing and the effects of vibration and movement during transport.

b) Ladders shall never be stored upright unless they are properly secured.

15.29.10. Fixed Ladders

a) Ladders shall comply with the applicable standard.

15.30. Lifting and Carrying

All employees involved in lifting shall be trained to recognize and mitigate the hazards by following these guidelines:

a) Before handling loads, a hazard assessment shall be completed to determine the difficulty of the lift to ensure the lift can be completed in a safe manner.

b) Wherever possible suitable equipment shall be provided and used for the handling of heavy or awkward loads.

c) Have firm footing and make sure the standing surface is not slippery.

d) Determine the best way to hold the load using any handles, gripping areas or special lifting tools. Get a firm grip on the load.

e) Keep your back straight by tucking your chin in.

f) Tighten your stomach muscles and lift with your legs.

g) Lift the load slowly. DO NOT JERK!

h) Hold the load as close to the body as possible. Be sure you position the load close to the body before lifting.

i) Do not twist during your lift or when moving the load. Turn with your feet, not with your back.

j) Set the load down gently. Use your legs and keep your back as straight as possible.

k) Be sure your fingers are out of the way when putting the load down and when moving the load through tight spaces.

l) Don't try to be Superman. **Ask for help** if you need it and use mechanical aids whenever possible.

m) Loads shall be carried in such a way as to permit a clear view of the path to be followed.

n) When two or more employees are required to lift or pull together as a team, their efforts shall be coordinated. One shall give the signal for the group.

o) When carrying pipes, conduit or other long objects, special care shall be used when rounding corners and entering doorways.

15.31. Lockout/Tagout and Energy Isolation

15.31.1. General Requirements

The company shall:

a) Ensure that trained, skilled, and qualified personnel perform tagging and lockout.

b) The lockout plan shall be under the control of a designated worker. The plan shall contain a log book to track the assignment of locks and keys and the designated worker shall have a duplicate key.

c) In an emergency or if the worker who installed the lock is not available, the designated worker may remove the lock after they verify that no workers will be in danger due to the removal.

d) Ensure that all safety precautions are in place and verify that adequate protection is in place and remains in place to safely perform the work tasks.

e) Re-establish system configuration and remove lockout/tag out devices following completion of the work protected by lockout/tag out.

f) If the equipment being serviced cannot be locked out, then a procedure must be developed to minimize the hazards. Only a designated person can deactivate this procedure.

g) Square B, LLC shall use its own procedure for Safety Tagging and lockout (LOTO).

h) Tagging or Lockout is required for hazardous energy in the presence of an energy source or a future potential source while working on the equipment.

i) All employees must honor lockout/tagout devices. No employee may remove a lock unless they have installed it.

j) Square B, LLC shall not use the group lockout system.

k) When a shift change occurs, the two qualified individuals will get together to review the work effort and change locks.

l) The machinery or equipment shall not be restored to operation until all tools are removed and a check is made to ensure no personnel are in a hazardous area.

m) Ensure that any potential stored power is dissipated.

n) Any time a lock is used to secure an energy source, it must be accompanied by a tag identifying the person that installed it, the date and time it was installed, and a means by which the employee may be contacted.

o) When equipment is locked out, a test shall be completed to ensure there is no energy before repairs are started.

p) During the lockout process the equipment shall come to a complete stop, before repairs or maintenance can begin.

15.31.2. Requirements When Lockout is not Required

a) In situations where the worker has exclusive and immediate control of the equipment a lockout system is not necessary.

b) If conductors are adequately grounded with a visible grounding mechanism.

c) If the voltage is less than 300 volts and there is no locking device for the circuit breakers, or fuses and adequate procedures are in place to ensure that the circuit is not inadvertently energized.

15.32. Machinery and Equipment

All machinery and equipment shall be well maintained and operated by authorized and trained workers.

a) There shall be a maintenance record for all equipment.

b) All equipment shall be inspected daily before use.

c) A detailed monthly inspection shall be completed by the operator or a Competent Person.

d) All defective equipment shall be taken out of service.

e) All operators shall be trained on the type of equipment they are operating.

f) Equipment must be locked out and tagged out before maintenance activities are performed.

15.33. Paint Use and Storage

a) Review Hazard Communications Data Sheets and follow recommendations for PPE, storage and handling practices.

b) Adequate ventilation shall be maintained in enclosed areas when painting.

c) Only approved solvents shall be used to clean brushes. The solvent shall be disposed of properly in approved containers in accordance with environmental procedures.

d) Open flames shall not be permitted in the area where painting is being performed.

e) In the spray-painting process there is more exposure to toxics. Be sure to confirm whether respirators may be needed.

f) Oil-based paint, varnishes and paint thinners shall be kept and transported in approved containers.

g) Oil-based paint, lacquers, and thinners shall be stored in an approved storage area, where there is adequate ventilation and no excessive heat.

h) Pressurized cans of paint, lacquer, etc. shall not be left in direct sunlight or where there is excessive heat.

i) When not in use, pressurized cans with recoverable products shall be stored in an approved storage area.

j) Empty cans and cans with non-recoverable products shall be disposed of properly. They shall not be punctured or placed in a fire.

15.34. Rigging Equipment

The following general items are required for all lifting operations and at a minimum shall comply with ASME standards for the applicable item:

15.34.1. General Rigging

a) All rigging operations shall be performed under the direction of a Competent Person.

b) All rigging equipment (cables, slings, shackles, hooks, sockets, Klein grips, etc.) must be inspected daily before use and the inspection documented.

c) Defective equipment must be removed from service and if not taken out of service tagged, so that it will not be used.

d) All rigging equipment shall be assembled, used, maintained, and disassembled under the supervision of a competent person in accordance with the manufacturer's specifications.

e) No rigging equipment will be loaded beyond its working load limit.

f) All rigging shall be stored to prevent damage.

g) All hooks shall have properly operating **safety latches**; any hooks used for lifting personnel shall have a double locking system.

h) Hooks shall be removed from service if the throat opening has been increased or the tip has been bent more than 10% or if the dimensions have been decreased by 10%.

15.34.2. Wire Rope

a) A wire rope used for rigging shall:
   i. Be steel wire rope of the type, size, grade and construction capable of supporting at least five times the maximum load to which it is likely to be subjected,
   ii. Be compatible with the sheaves of hoisting blocks,
   iii. Be lubricated to prevent corrosion and wear,

b) Wire rope shall be taken out of service under the following inspection criteria:
   i. Contain six or more randomly broken wires in one rope lay or three or more broken wires in one strand in one rope lay,
   ii. Contain one or more broken wires at an end connection,
   iii. Be smaller than its nominal rope diameter,
   iv. Have wire worn by more than one-third of the original diameter, or,
   v. Show evidence of kinking, bird-caging, corrosion, electric arcing or other damage resulting in distortion of the rope structure.

c) Wire rope and all the attachments shall have a safety factor of 5 to 1 for rigging and 10 to 1 for lifting personnel.

d) The proper strength reduction shall be considered based on the type of end connection being used. A manufactured eye should be considered as a 100 percent connection and in general field install eyes would be 80 percent. In regards to field connections, the Competent Person on site should know the percentage of reduction for the type of end connection being installed.

e) The size of the wire rope shall be compatible with the sheave groove in the rooster head and hoisting blocks.

f) The strength efficiency of the wire rope shall be considered when matching the sheave diameter to the wire rope diameter. (D:d)

15.34.3. Chains

a) Only an alloy steel chain or a chain manufactured for lifting purposes shall be used for hoisting. It shall have markings consisting of an 8, T or an A.

b) Only the manufacturer or its representative shall repair alloy chain.

15.34.4. Synthetic Slings

a) Slings or similar devices for rigging or hoisting made of web-type fabric or nylon shall not be used in a manner where the sling may be cut or damaged.

b) Non-metallic slings shall have legible tags indicating the manufacturer's Working Load Limit (WLL) for the vertical, chocked and basket configurations.

c) When lifting personnel, the Working Load Limit (WLL) shall be reduced by 50%.

d) It is common practice to provide wear sleeves in high wear applications to prevent damage to non-metallic slings.

15.34.5. Synthetic Rope

a) The Working Load Limit (WLL) for synthetic rope shall not be greater than the Minimum Breaking Strength (MBS) divided by 10. The safety factor of synthetic rope includes considerations for typical sheave and end termination efficiency factors.

b) Synthetic rope shall not be used unless there is documentation available verifying its Minimum Breaking Strength (MBS).

c) The size of the synthetic rope shall be compatible with the sheave groove of hoisting blocks.

15.34.6. Blocks

a) All blocks used for rigging shall be designed to have a 4:1 safety factor.

b) The sheave groove shall match the size of line going through it.

c) For double braid rope the D:d ratio shall be 8 to 1.

d) For wire rope the D:d ratio shall be 18:1.

15.35. Scaffolding

Scaffolding shall be used where work cannot be done safely from the ground or from a permanent structure. All material used shall comply with the applicable standard. All scaffolds erected shall comply with all federal/local requirements. Scaffold erection, inspection, moving or dismantling and documented repairs shall be completed under the supervision of a Qualified Person. A Qualified Person is one who has specific training and is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
A competent Person shall ensure that all workers are trained to complete their tasks and the hazards have been identified and reviewed through the JHA process.

15.35.1. General

Enclosed are guidelines to follow while installing and working on scaffolds.

a) The qualified person supervising the job shall place his or her tag on the system and instruct all workers on the site that the tag cannot be removed for the duration of the project. This tag shall show the date of last maintenance, signature of the person who performed the maintenance and that the maintenance was carried out in accordance with the manufacturer's recommendations.

b) The qualified person shall ensure that entry points are marked with color coded tags; green is safe for use, yellow is caution or an unusual hazard and red is unsafe for use.

c) Workers will not work on scaffolds that have a; red tag, expired tags or no tags at all.

d) Scaffolds and their components shall be capable of supporting without failure, at least four times the maximum intended load. The scaffold system shall not be subject to any load greater than its design load.

e) All scaffolds shall be built complete where possible, including a standard 42 inch high handrail and midrail 21 inches from work platform both rigidly secured, with complete decking and toe boards. Toe boards shall be securely fastened. There shall be no more than a 1/4 inch space between the toe board and scaffold deck. Toe boards shall be built from 1 x 4 lumber.

f) Scaffold legs shall be set on base plates placed on foundations or mudsills that are adequate for supporting the maximum intended loads. The use of bricks and/or blocks is prohibited.

g) All casters used with scaffolding shall have rubber treads and positive locks to hold the scaffold in position. Casters shall be locked when the scaffold is being erected or used.

h) Adjusting screws shall be installed only between the base plate and the vertical frame section. The use of adjusting screws with casters is prohibited. Extending adjusting screws beyond 30.5 cm. (12 inches) is prohibited.

i) Scaffolds shall be properly braced with all cross braces and/or diagonal braces to laterally secure vertical members. The length of cross braces should automatically square and align vertical members so the erected scaffolds are always plumb, square, and rigid. Manually propelled mobile scaffolds shall be laterally braced with a horizontal diagonal brace in addition to a cross brace. The use of cross braces as handrails or mid-rails is prohibited.

j) Before planks are incorporated in a scaffold they must be inspected by a qualified person to ensure they are free of defects.

k) Platforms shall be tightly planked for the full width of the scaffold and they shall extend over the end supports between 6 inches and 12 inches. A cleat or equivalent shall be used on the bottom edges of the plank to prevent slippage. All scaffold planking shall be scaffold grade 2 x 10 fir or spruce or equivalent.

l) All scaffolds shall be provided with an access ladder that extends at least 36 inches above the platform, or an equivalent safe access.

m) Scaffolds installed higher than 50 feet above the base plates must have the plan approved by a qualified/certified engineer.

n) Scaffolds installed higher than 125 feet in height must be designed by a registered professional engineer.

o) When the height of a scaffold exceeds three times the smallest width of the base, it shall be secured to the building or structure at every other lift and every 20 feet horizontally. Out-riggers shall be used when it is impractical to secure the scaffold to the structure.

p) All employees working on a scaffold shall use fall protection when working at elevations above six feet.

q) Scaffold erectors shall use fall protection while erecting scaffolding.

r) Where a vertical rope is used for fall protection it must be securely anchored independently of the scaffold.

s) If a guardrail system is used for fall protection then the railing must meet the standards for that application.

t) During installation all leg connections and bracing shall be properly connected as specified by the manufacturer.

u) Scaffold components manufactured by different manufacturers shall not be intermixed.

v) Prior to use, scaffolds shall be visually inspected. Deficiencies shall be reported to crew leader and repaired prior to work commencing.

w) Employees shall be prohibited from working on scaffolds covered with snow, ice or other slippery material except as necessary to remove such items.

x) Work on scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe to do so.

y) Debris shall not be allowed to accumulate on platforms.

z) No item shall be used to increase the working level height.

aa) Scaffolds shall not be erected inside the limits of approach for power lines and their applicable voltage.

15.36. Storage and Handling

Square B, LLC shall ensure there are practices and procedures in place for stacking material.

15.36.1. Manual Handling Practices

a) The proper assessment and care shall be taken when manually lifting material.

b) When the size and weight of the material to be handled is too heavy, then a mechanized means shall be used.

15.36.2. Stacking Materials

a) Steel pallet racking must be base-anchored and top tied when the ratio of height to minimum base measurements exceed 6:1. The measurement shall be taken from the base to the upper most point of the stack.

b) When using the 6:1 ratio, caution should be used whenever the material may be top heavy or the geometry of the material is not conducive to stable stacking.

c) All drive-in and drive-through areas must be anchored and tied back regardless of the height.

d) Material and equipment must be placed, stacked or stored in a stable and secure manner.

e) Stacked material or containers must be stabilized as necessary by interlocking, strapping or other effective means of restraint to protect workers.

15.36.3. Falling Material Hazards

In active work areas where there is a possibility of material falling during the stacking process, the area shall be guarded against for inadvertent entry.

15.37. Suspended Scaffolds

A suspended platform shall be installed and used under the supervision of a competent person who is trained in the installation, use, and inspection of suspended scaffolds and the associated fall protection system.

a) A suspended platform shall be attached to a fixed support or outrigger beam in accordance with the manufacturer's instructions.

b) A fixed support or outrigger beam shall be capable of supporting at least four times the maximum load to which it may be subjected.

c) An outrigger beam shall be tied back to a fixed support with a secondary line, each of which is capable of supporting the weight of the suspended load and the supporting system.

d) An outrigger beam shall be secured against horizontal and vertical movement.

e) An outrigger beam shall have securely attached counterweights that are:

   i. Specifically designed for the outrigger beam and
   ii. Manufactured for that purpose.

f) Load chart instructions for the use of the counterweights shall be affixed to the outrigger beam.

Table 1 Example

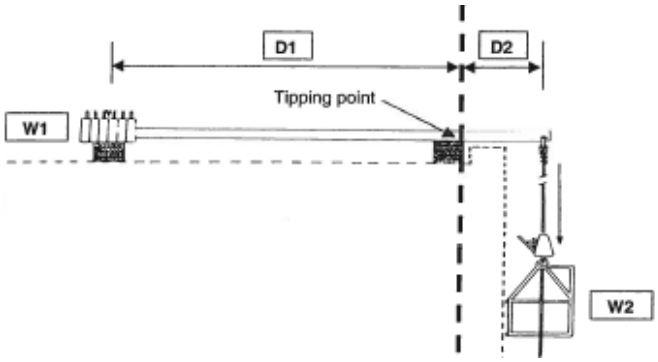
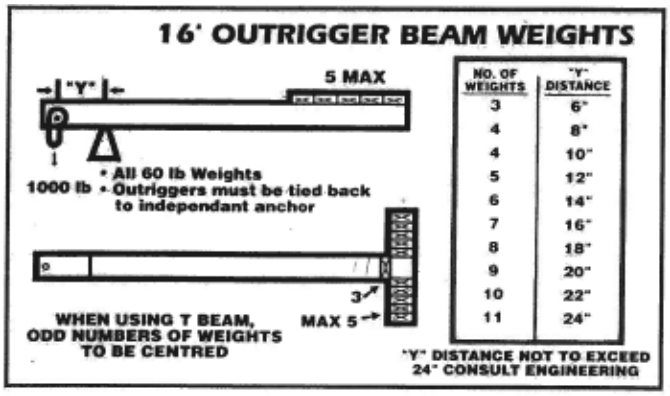


Table 2 Example



g) Every part of the hoisting and rigging system for a suspended platform shall be capable of supporting at least ten times the maximum load to which it is likely to be subjected.

h) A suspended platform that is capable of moving either horizontally or vertically shall have supporting cables that:

   i. are vertical from the fixed support or outrigger beam,
   ii. are parallel if there is more than one supporting cable, and
   iii. that extend to the ground or have a positive stop that prevents the suspended platform from running off the end of the supporting cables; and

i) Rope falls equipped with suitable pulley blocks or mechanical hoisting device that:

   i. has legible operating and safety instructions affixed to it in a conspicuous location, and
   ii. is equipped with a positive device to prevent the platform from falling freely.

j) A suspended platform shall have steel wire rope support cable or cables.

k) A competent worker shall inspect a suspended platform before each day's work.

l) The lifting and lowering device on a platform shall be attached as per the manufacturers' instructions but never less than 150 mm (6 in) but not more than 450 mm (18 in) from the ends of the platform.

m) Wire mesh shall be securely fastened in place from the toe-board to the top rail of the guardrails of a suspended platform.

n) A worker who is on or is getting on or off a suspended platform shall wear a full body harness connected to a fall arrest system.

o) Every lifeline used with a suspended platform shall:

   i. be suspended independently from the platform and
   ii. be securely attached to a fixed support so that the failure of the platform or its supporting system will not cause the lifeline to fail.

p) In instances where the scaffold is designed to support fall protection, then fall protection may be attached to the scaffold.

q) The distance between the platform of an outrigger scaffold and the wall beyond which the scaffold extends shall not exceed 3 inches.

15.38. Tools Hand and Power

All tools and equipment with exposed moving parts shall be guarded to protect workers.
Records shall be kept for those pieces of equipment that require maintenance per the manufacturer specifications. When selecting and using tools; the ergonomic impact to workers shall be considered.

15.38.1. Hand Tools Inspection

a) All tools regardless of ownership shall be maintained in good condition.

b) Tools are subject to inspection at any time. You and your supervisor have the authority to remove unsafe tools from service.

c) Defective tools shall be tagged to prevent their use and shall be either repaired or disposed of.

d) Tools should be used only for the purpose for which they were designed.

e) Tools shall be dismantled and reassembled by a qualified person.

15.38.2. Use and Maintenance

a) Before starting tools or equipment all operators shall ensure it is safe to do so.

b) Hammers with metal handles, screwdrivers with metal continuing through the handle and metallic measuring tapes shall not be used on or near energized conductors or equipment.

c) Tools that must be raised or lowered from one elevation to another shall be placed in a tool buckets or firmly attached to hand lines.

d) Tools shall not be left unsecured on scaffolds, platforms, or other elevated places where their falling could endanger employees below.

e) Impact tools such as chisels, punches, drift pins, and hammers, that become worn, mushroomed, or cracked, shall be dressed before further use or replaced.

f) Tools with sharp edges shall be stored and handled so they will not cause injury.

g) Personnel are to wear the appropriate personal protective equipment consistent with the hazard.

15.38.3. Power Tools

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use; electric, pneumatic, liquid fuel, hydraulic, and powder–actuated.

Employees shall be trained to be competent in the use, inspection and maintenance of all tools—not only power tools. They shall understand potential hazards and safety precautions to prevent those hazards from occurring. Power tool users should observe the following general precautions:

a) Never carry tools by the cords or hoses. Tools that must be raised or lowered from one elevation to another shall be placed in tool buckets or raised by hand lines.

b) Damaged or defective tools are to be taken out of service, tagged “Do Not Operate,” and stored in a controlled area until appropriate repairs have been made. Supervisors shall be informed when tools are taken out of service.

c) Tools are not to be altered in any way and shall be operated in accordance with manufacturing specifications.

d) Tools required to have guards shall not be operated without guards in place.

In special situations, guards may need to be removed or adjusted. In these situations a written plan shall be put in place to address any additional hazards and all employees using the tool will be made aware of the plan. The plan will be noted on the DJHA

e) Persons who operate ground compactors; rollers, chisel impact hammers, and other such tools shall wear appropriate protective footwear.

f) Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.

g) Job-made tools of any kind are prohibited.

In special situations a job made tool may be necessary. In those situations a written plan shall be put in place addressing any additional hazards and all employees using the tool will be made aware of the plan. The plan will be noted on the DJHA.

h) Tools shall not be left unsecured on scaffolds, platforms, or other elevated places where falling could endanger employees below.

i) Impact tools such as chisels, punches, drift pins, and hammers, that become worn, mushroomed, or cracked, shall be removed from service.

j) Proper apparel shall be worn; loose clothing, ties, hair or jewelry can become caught in moving parts.

k) Tools with sharp edges shall be stored and handled so they will not cause injury.

15.38.4. Electric Tools

Employees using electric tools must be aware of several hazards; the most serious is the possibility of electrocution. To protect the user from shock, tools must either have:

a) Three–wire cord with ground and be grounded,

b) Be double insulated or,

c) GFCIs shall be provided for all areas.

15.38.5. Pneumatic Tools

There are several hazards encountered in the use of pneumatic tools.

a) The main one is the danger of being hit by one of the tool's attachments, or some kind of fastener the worker is using with the tool.

b) Working with noisy tools such as jackhammers for an extended length of time may require proper use of hearing loss protection.

c) When using pneumatic tools, employees must check to see that they are fastened securely to the hose by a positive means to prevent them from becoming disconnected.

d) The pressure of compressed air used for cleaning purposes must be reduced to 10 psi or less. Compressed air shall not be used for cleaning or blowing dust from any part of the body or clothing. Eye protection must be worn.

e) Workers operating a jackhammer must wear safety glasses, gloves, and leather work boots with steel toes or toe protectors.

f) Bleed out the air before disconnecting the hoses

15.38.6. Powder–Actuated Tools

General safety precautions:

a) Employees will be trained in safe use prior to using any powder-actuated tools.

b) These tools shall not be used in an explosive or flammable atmosphere.

c) Before using the tool, the employee should inspect, and ensure that all moving parts operate freely.

d) The tool should never be pointed at anybody.

e) The tool should not be loaded unless it is to be used immediately. A loaded tool should not be left unattended, especially where it would be available to unauthorized persons.

f) Hands should be kept clear of the barrel end. To prevent the tool from firing accidentally, two separate motions are required for firing: one to bring the tool into position, and another to pull the trigger. The tools must not be able to operate until they are pressed against the work surface with a force of at least five pounds greater than the total weight of the tool.

g) If a powder–actuated tool misfires, the employee should wait at least 30 seconds, and then try firing it again. If it still will not fire, the user should wait another 30 seconds so that the faulty cartridge is less likely to explode, and then carefully remove the load. The bad cartridge should be put in water and disposed of properly.

h) Safety glasses, gloves and face shields shall be worn when using a powder–actuated tool.

i) If noise is a concern then the proper hearing loss protection shall be used.

j) The muzzle end of the tool must have a protective shield or guard centered perpendicularly on the barrel to confine any flying fragments or particles, which might otherwise create a hazard when the tool is fired. The tool must be designed so that it will not fire unless it has this kind of safety device.

k) Control shall be maintained over the powder-actuated charges. No live or spent cartridges shall be left on the ground or disposed of in site trash cans or other unauthorized onsite, or an off-site, container.

15.38.7. Gasoline Powered Tools

The most serious hazard with fuel–powered tools comes from fuel vapors that can burn or explode.

a) Gasoline powered tools shall not be used in unventilated areas.

b) Gasoline shall be dispensed from only UL/FM approved safety cans. These cans shall be properly labeled and stored. Fire extinguishers must be available in the area.

c) Employees shall be careful while handling, transporting, and storing gas or fuel in approved flammable liquid containers, according to proper procedures for flammable liquids.

d) Before the fuel tank of a fuel–powered tool is refilled; the user must shut the engine down and allow it to cool to prevent accidental igniting of hazardous vapors.

15.39. Walking, and Working Surfaces

When working on elevated platforms where workers could fall, then a guardrail or a means to prevent that fall shall be in place.

a) All guard rails shall be design per the current regulations and at a minimum shall consist of a top rail, intermediate rail and a toe board:

   i. Top rail shall be not less than 36 inches and not more than 42 inches.

   ii. The posts shall be no more than 8 feet apart.

   iii. The toe board at a minimum shall be 4 inches above the floor with a maximum of 1/2” gap.

b) If a guardrail must be removed to accommodate work, the worker must wear the appropriate PPE.

15.40. Welding, Cutting, and Other Hot Work

15.40.1. Welding and Cutting

A competent person shall perform all welding and cutting per the applicable standards.

a) All employees shall use the proper personal protective equipment and clothing when performing or assisting in cutting and welding operations. (For example: flame resistant clothing, leather gauntlet gloves, arm protection, leather apron, eye and face protection and safety footwear)

b) Welding leads and equipment shall be properly stored, maintained and inspected before use. Defective equipment shall be taken out of service.

c) Arc welding and cutting operations shall be shielded by appropriate safety devices.

d) Welding machines shall be turned off when being moved or when the welder must leave work for any length of time.

e) No welding or cutting shall be performed where flammable paints, compounds, or dust may create a hazard.

f) All equipment shall meet the applicable ANSI standard.

g) Welding leads or cords that cross a pathway or roadway shall be protected from damage.

h) If welding is to be performed in a confined area, then an adequate ventilation system shall be used.

i) If ventilation is not sufficient, then applicable respiratory protective equipment shall be used.

j) There are specific coatings on metal that could produce harmful contaminate byproducts. When working on these coating the proper steps shall be taken to ensure the safety of the worker.

k) An appropriate number of approved fire extinguishers shall be readily available.

l) During welding and cutting operations, if the area is accessible by other workers then the hot material must be marked.

m) During welding and cutting operations, the work area shall be kept tidy from trips and hazards.

n) Fire proof containers shall be supplied for electrode stubs.

o) In situations where workers have access underneath the operations, then a process or plan must be in place to protect the worker from hot sparks and falling objects.

15.40.2. Compressed Gas Cylinders

a) Valves on fuel gas shall not be opened more than 1-1/2 turns. If a special wrench is required for closing the valve, the wrench shall be left in position on the stem at all times or until the task is completed and the caps are replaced.

b) Torches shall be lit by friction lighters or other approved devices only.

c) Oxygen/fuel gas systems shall be equipped with approved backflow valves, flash arresters, and pressure relief devices.

d) Cylinder valves shall be closed when not in use.

e) Be secured in an upright position at all times, except for short periods when being carried or hoisted.

f) Be transported in an upright position with caps on and shall not be hauled in equipment beds or truck beds on their side.

g) Be stored/located to avoid exposure to sparks, hot slag, or flames. If these cannot be avoided, fire-resistant shields or blankets shall be provided.

h) Cylinders not in use shall be separated (oxygen from fuel gas) by a 5-feet high barrier with a 1-hour fire rating or by a distance of 20 feet. Be stored in well-protected, ventilated, dry locations, at least 20 feet from highly combustible materials, and away from egress routes such as stairways and elevators.

i) Fuel gas hose and oxygen hoses shall be easily distinguishable and shall not be interchangeable.

j) Cylinders shall be legibly marked as to contents and rated pressure at all times.

k) All connecting hoses shall be equipped with flashback arrestors between the torch and regulator.

l) All regulators and connecting hoses in use shall be inspected and leak tested at the beginning of each working shift.

m) Hoses, cables, and other equipment must be kept clear of passageways, ladders, and stairs.

n) Empty and full cylinders shall be stored separately.

o) Cylinders shall not be dropped, struck, rolled in the horizontal position or exposed to temperature extremes.

p) Cylinders in use or being stored shall not lie in a horizontal position.

q) Caps provided for valve protection shall be in place on the cylinder hand-tight, except when regulators are attached.

r) Compressed gas shall not be released from any cylinder without using a suitable regulator except to initially clean the valve orifice.

s) The control valve shall be opened only enough to blow out any foreign particles before connecting the regulator or line to the cylinder. Ensure the opening is facing away from you during this process.

t) Always wear the appropriate PPE for the applicable job. (gloves, goggles, etc.)

u) During cutting operations ensure you have applicable ventilation.

v) Sparks or flames shall be kept away from cylinders and hoses.

w) Square B, LLC relies on third party pressure testing for all cylinders requiring such testing.

x) Oxygen gas cylinders shall only be used as intended.

15.40.3. Hot Work

Square B, LLC does not work on pipelines, compressed or liquefied gas systems so no processor training is necessary.

Square B, LLC very seldom completes Hot Work, but in situations where welding or cutting must be completed and there are combustibles materials, then a document plan shall be created base on the site specific work and using current applicable standards as a guideline. At a minimum the following shall be considered:

a) All workers participating shall be provided hot work training.

b) A hot work permit is necessary and it shall be filled out before work commences.

c) Combustible material shall be removed or protected with fire-resistant blankets or equivalent.

d) The work shall comply with current ANSI standards.

e) Suitable testing will be conducted to indicate that the atmosphere is clear of flammable substances and confirm that the work may be safely preformed. Results of these tests will be recorded.

f) All equipment shall be used per manufactures' specifications.

g) Flammable substances must be purged using an effective method to remove the flammable substance from the container or piping before hot work begins.

h) Protective screening shall be used to protect workers in the active areas.

i) A fire watch must be maintained during hot work and for thirty minutes after hot work is complete.

Health Safety and Environmental Policy Manual

Employee Acknowledgement Form

By signing below, I hereby confirm receipt of the Square B, LLC HSE Policy Manual. I acknowledge that I am expected to read the manual, pass a test achieving at least 75 percent, then reviewing the exam for 100 percent understanding and then keep the manual for continual reference.

I also understand that following the rules and regulations of the HSE manual are a condition of employment with Square B, LLC and failure to comply with those rules may result in immediate termination.

Signatures:

_____ Employee Name:	_____ Signature:	_____ Date:
_____ Management Name:	_____ Signature:	_____ Date:

Definitions

Enclosed are definitions for words used in the body of this document or applicable to our industry.

Term	Definition
Acceptable Entry Conditions	The conditions that must exist in a confined space to allow entry and to ensure that employees involved with confined space entry can safely enter into and work within the space.
ANSI	American National Standards Institute
Acceptable Access Conditions	Conditions that shall exist before a tower owner or Square B, LLC Communications will grant permission to climb a tower.
Activity Area	The section of the highway where work takes place and is comprised of the work space, traffic space, and buffer space.
Adjacent	The area within a horizontal distance from the edge of a vertical sided excavation.
Administrative Controls	A method of managing noise-exposed workers' activities that have the effect of limiting each worker's exposure to hazardous noise.
Aerial Lift Device	A mobile device with an adjustable positioned platform, supported from ground level by a structure
Alteration	Is any change or addition to the equipment other than ordinary repairs or replacements.
Anchorage	A secure point of attachment for lifelines, lanyards or deceleration devices, and which is independent of the means of supporting or suspending the employee.
Anti-two Blocking	Is a system or method for preventing the downhaul ball or traveling block from coming in contact with sheave head.
Approved	Sanctioned, endorsed, accredited, certified or accepted by a duly constituted and recognized authority.
Arresting Force	The force produced by the fall arrest system on the human body when arresting a fall.
Asbestos-containing Materials	Any manufactured articles or other materials that contain 1% or more asbestos by weight at the time of manufacture.
Authorized Climber	Is an individual with the physical capabilities to climb; who may or may not have previous climbing experience; has been trained in fall protection regulations, the equipment that applies to communication structures work, and instruction for proper use of the equipment.
Authorized Person	(Designated Person) Is a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at a job site.
Barricade	An obstruction or barrier to deter the passage of persons or vehicles.
Base-Mounted Drum Hoist	(Hoist Mechanism or Hoist) Refers to the complete unit including; frame, prime mover, pumps, motors, drums and any associated equipment that is relevant to make the complete unit work.
Benching	A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.
Boatswain Chair	Is a seat consisting of a board and a rope, originally used on ships and later adapted for working at heights on buildings and other structures.
Boatswain Seat	Is a full body harness that incorporates a rigid or flexible seat.
Body Belt	Is a belt used for carrying tools or can supply support during ladder climbing, positioning or restraint.
Body Harness	A design of straps which contains the torso and is secured about the user in a manner to distribute the arresting forces over the torso and thighs with a means for attaching it to other components of a personal fall arrest system.
Brakes	A mechanical or hydraulic system that can decelerate or stop a load.
Breaking Strength (BS)	The ultimate load at which a tensile failure occurs. (Note: The term breaking strength is synonymous with actual strength)
Bump Cap	Is a cap worn to prevent scraps and bumps and does not comply with current ANSI standards.
Capstan Hoist	Is a mechanical unit that has a drum for wrapping synthetic rope to gain a mechanical advantage during lifting.
Carabineer	A connector generally comprised of a trapezoidal or oval shaped body with a closed gate or similar arrangement that may be opened to attach another object and when released automatically closes to retain the object.
Cave-in	The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the

Term	Definition
	excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure or immobilize a person.
Certificate	Is a written document attesting to the successful completion of an established training program by an individual trainee.
Certification	Is the act of attesting in writing that the criteria established by regulations and standards have been met.
Certified	Is the act or process resulting in documentation that determines and attests to criteria that meet the requirements of the current regulations and standards and the act or process may be carried out by testing or applying methods.
Classroom	Is a location that is conducive for the student to comprehend and retain the material presented.
CLC	Stands for “Canadian Labor Code” and is used whenever we are referencing the book itself or the regulations in the book.
Clearance Distance	Is the measured distance by which one object is separated from another.
Come-Along	A portable, hand operated device consisting of a housing, chain or wire rope, two hooks, and a ratcheting lever, that is used for pulling or to facilitate movement of materials through leverage.
Communication Towers	A structure usually linear in shape often described as a Monopole, Self Support, Guyed, Building or any structure that supports Communication Antennas.
Conductive Testing	Geophysical method used to trace cables, water and gas distribution lines using audio frequency.
Climber	Any person who ascends the tower to a height of more than 6 feet
Climbing Supervisor	Person (such as the employer, foreman, or crew leader) responsible for determining if acceptable tower climbing conditions are present at the tower where the work is planned, for authorizing the climb, and overseeing climbing operations, and for terminating the work as required.
Combustible Gas	A gas capable of supporting combustion at or above 100 F.
Competent Climber	Is an individual with the physical capabilities to climb, has actual climbing experience and training in fall protection regulations including the equipment that apply to their field and who is capable of identifying existing and potential fall hazards; and who has the employer’s authority to take prompt corrective action to eliminate those hazards.
Competent Person	Means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate the hazard.
Competent Rigger	Is a person knowledgeable and experienced with the procedures and equipment common to the Communication Structures Industry, and trained to identify hazards with authorization to take prompt corrective measures.
Competent Rescuer	A competent rescuer is a competent climber with training in rescue and who is also capable of identifying predictable rescue needs of climbers and has the authority to prepare and implement rescue operations for them.
Component	Is an item or part of a complete fall protection system.
Confined Space	Normally enclosures having limited means of access and egress, such as tanks and trenches, and/or where hazardous gas, vapors, dust, fumes, or oxygen deficient atmospheres occur, or flammable or explosive vapors may accumulate.
Continuous Noise	Any noise that remains at a steady level with variations of less than 5 decibels over time.
Connector	A device, which is used to couple (connect) parts of a PFAS together. It may be an independent component of the system (such as a carabineer), or an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).
Controlled Load Lowering	The lowering of a load by means of a mechanical hoist drum device that allows a hoisted load to be lowered with maximum control using the gear train or hydraulic components of the hoist mechanism. Controlled load lowering requires the use of the hoist drive motor, rather than the load hoist brake, to lower the load.
Controlling Contractor	A prime contractor, general contractor, project manager or any other legal entity at the site who has, by contract with other parties, the overall responsibility for the project, its planning, quality, and completion.
Cutover	The process of disconnecting existing lines, connecting to new equipment and reconnecting existing facilities.
Crane	A machine used for lifting and lowering a load vertically and moving it horizontally that has a non-manual hoisting mechanism as an integral part.

Term	Definition
Crown Block	(Top Block or Load Block) the upper sheave assembly attached to the structure used to change the direction of the load or jump line coming from a hoist.
DC Power	An electrical current flowing in one direction only.
Deceleration Device	Any mechanism, such as a rope grab, rip stitch lanyard, specially woven lanyard, tearing or deforming lanyard, or automatic self retracting-lifeline/lanyard, which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limits the energy imposed on an employee during fall arrest.
Deceleration Distance	The additional vertical distance a falling employee travels, excluding lifeline elongation and free fall distance, before stopping, from the point at which the deceleration device begins to operate. It is measured as the distance between the locations of an employee's body belt or body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.
Decibel	(dB) Is a unit of measurement of sound pressure level.
Descent Control Device	Is a device that automatically and manually controls the descent speed during rescue and descending during work tasks.
Designated Person	A person who possesses specialized abilities in a specific area and is assigned by the employer Square B, LLC to do a specific task in that area.
Dismantling	Is the removal of existing antennas, appurtenances, structural components or the structure itself.
DOT	Department of Transportation
Downhaul Ball	(Headache Ball) A counterweight attached to the end of the load line to counter balance the weight and friction of the wire rope and return the load line to the ground.
Drum	A cylindrical member with flanges on each end around which rope is wound for lifting or lowering a load.
Effectively Grounded	The term means intentionally connected to earth through a ground connector or connections of sufficiently low impedance and having sufficient current-carrying capacity to prevent buildup of voltages which may result in undue hazard to connected equipment or to persons.
EME	**"Electromagnetic Radiation"** Is an energy wave in the portion of the spectrum that we work with and is non-ionizing in nature.
Engineer	A licensed or professional engineer qualified by training and experience in an applicable field.
Entry (confined space)	The action by which a person passes through an opening into a confined space. Entry includes: ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.
Entry Permit	The written or printed document that is provided by the employer Square B, LLC to allow and control entry into a confined space and that contains the information specified in this HSE Program.
Entry supervisor (confined space)	The person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this HSE Program.
Equivalent	An alternate design, feature, device, or protective action that provides an equal or greater degree of safety.
Evaluation	Is a documented process where a competent person compares each individual's knowledge and ability against a specific program based on current regulations and standards.
Examination	Is means of verifying a workers understanding of a specific topic and this understanding can be written, oral or demonstrative.
Factor of Safety	(FS) The ratio of the ultimate breaking strength of a member or piece of material or equipment to the actual working stress or safe load when in use.
Failure	The breakage, displacement, or permanent deformation of a structural member, mass, component, or connection so as to reduce the structural integrity and/or the supportive capabilities of the worker-protection system.
Fall Arrest	The action or event of stopping a free fall or the where the downward free fall has been stopped.
Fall Arrest System	The collection of equipment components that are configured to arrest a free fall.
Fall Protection	Any equipment, device or system that prevents an accidental fall from elevation or that mitigates the effect of such fall.
Fall Restraint	The technique of securing an authorized person to an anchorage using a lanyard short enough to prevent the person's center of gravity from reaching the fall hazard.
FCC	Federal Communications Commission

Term	Definition
FPB	Stands for “Flash Protection Boundaries” and is defined as the distance at which a worker is exposed to 1.2 calories/cm2 of incident energy.
First Aid Attendant	Means a holder of a valid basic or standard first aid certificate.
First Aid Station	Means a place, other than a first aid room, at which first aid supplies or equipment are stored.
Flagger	A person who provides temporary traffic control through the use of Stop/Slow paddles, emergency traffic flags and other devices designed to direct traffic.
Flammable	Any material that is easily ignited, especially by means other than direct flame.
Fleet Angle	Is the wire rope deviation angle from a line normal (perpendicular) to the pin axis of a sheave or block.
Flemish Eye	Is an eye splice made by weaving a cable back on its self to make an eye.
Floor Hole	Any gap or void measuring 12 inches or less at its largest dimension, but more than 1 inch at its smallest dimension, in any floor, roof, or platform through which materials, but not persons, may fall, such as a belt hole, pipe opening, or slot type opening.
Floor Opening	Any gap or void measuring 12 inches or more at its smallest dimension in any roof, floor, or platform through which a person could fall.
Foot Block	(Heel Block) A block mounted at or near the bottom of a structure for the purpose of changing the direction of the hoisting rope from approximately horizontal to approximately vertical.
Free fall	The act of falling before the personal fall arrest system begins to apply force to arrest the fall.
Free Fall Distance	The vertical displacement of the fall arrest attachment point on the employee’s body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, lifeline and lanyard elongation but include any deceleration device slide distance or self-retracting lifeline/lanyard extension before they operate and fall arrest forces occur.
Full Body Harness (FBH)	A component with a design of straps which is fastened about the person in a manner so as to contain the torso and distribute the fall arrest forces over at least the upper thighs, pelvis, chest and shoulders with means for attaching it to other components or subsystems.
Gin Pole	Is a lifting device that allows headroom above the highest fixed point of a structure used to raise successive sections of structural steel, antennas, or equipment into position.
Gross Load	Is the total weight of the lifted load, the headache ball, the load line, the tag line, and all associated rigging.
Guarded	Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable covers, casings, barriers, rails, screens, mats, or platforms to remove the likelihood of approach to a point of danger or contact by persons or objects.
Guard Rail System	A barrier system erected along the open sides and ends of platforms as well as along the perimeter of unguarded roofs, floors, and roof and floor holes. The rail system consists of toprails, midrails, toeboards and their supports.
(GFCI)	“Ground Fault Circuit Interupter”Is a device that recognizes a fluctuation in current and as a result of that fluctuation breaks the electrical flow.
Hand Tool	Are tools manufactured to be used by hand and can be operated using manual or mechanical force.
Hearing Protection	Is the equipment worn to reduce the intensity of sound entering the ear.
Heel Block	(Foot Block)
Hoisting	The act of lifting and lowering loads or personnel.
House Keeping	Policies and procedures necessary to keep the work site clear of debris to preclude the creation of tripping, slipping and fire hazards.
Horizontal Lifeline	A component of a horizontal lifeline system, consisting of a flexible line with connectors or other coupling means at both ends for securing it horizontally between two anchorages or anchorage connectors.
Hybrid Component	An integral assembly of elements or components, or both, intended to perform more than one function in the system.
Hydraulic	A means of energy transmission using the flow of non-compressible liquid.
HSE	**Health Safety and Environment**
Hazardous Atmosphere	An atmosphere that will be or is injurious to occupants by reason of oxygen deficiency or enrichment or contains a substance that may be injurious to the health of a person.
Hazardous Substance	A substance which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritant, or otherwise harmful is likely to cause injury.
Impact Load	A dynamic load due to sudden acceleration or deceleration.
Integral	Essential component of a system or subsystem that makes the system complete.

Term	Definition
Incident	Is an accident or other occurrence which resulted in or had the potential for causing an injury.
Inspection	An examination of equipment or systems to assess conformance to a particular standard
Isolation (confined space)	The process by which a confined space is removed from service and completely protected against the release of energy and material into the space by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or Tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.
Job Hazard Assessment (JHA)	A planning and assessment process that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment, breaking the job down into its component steps. This is best done by jointly analyzing each step in order of occurrence with the effected employee. Next, each step is evaluated to determine the hazards and at-risk behaviors that exist or that might occur; then developing the appropriate control measures to mitigate the identified hazards. Finally, the job steps, hazards and control measures are reviewed with the employees before they perform the job.
Jump Line	A secondary line or cable to used to raise and lower the gin pole.
Label	Any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
Lanyard	A component consisting of a flexible line of rope, wire rope, or strap, which typically has a connector at each end to secure the body support to a fall arrestor, energy absorber, lifeline, or anchorage.
Leading Edge	The unprotected side and edge of a floor, roof, or form work for a floor or other walking/working surface (such as deck) that changes location as additional floor, roof, decking or form work sections are placed, formed, or constructed.
Lifeline	A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.
Live Load	Is the gross load with a tag force.
Load Chart	A published table that defines the lifting capacities of a specified unit like a; hoist, gin pole or crane.
Load Line	The primary line or cable with components of sufficient size and strength to safely raise or lower the intended loads..
Lock Box	A container in which the key of the lockout device is placed and all affected employees place their lock on the container. The key to the lockout device remains locked in the container until all affected employees have removed their lock from the container.
Lockout/Tagout	The placement of a lockout device and a tag (in combination) on the energy isolating device in accordance with an established procedure, indicating that the energy isolating device shall not be operated until removal of the lockout device and tagout device in accordance with an established procedure.

Lockout Device	A device that utilizes a positive means such as a uniquely keyed lock with the key kept under the control of the authorized employee to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Examples of acceptable lockout devices include, but are not limited to, blank flanges, bolted slip blinds, or other similar means.
May	Understood to be permissive.
Maximum Intended Load (Scaffolds)	The total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.
Minimum Breaking Strength (MBS)	The published or expected minimum ultimate breaking strength of a component in its like new condition.
New Worker	Is defined as an individual who has one day to three months of work experience with Square B, LLC and is new to the industry.
Night Work	Work performed one half hour before sunset until one half hour after sunrise.
Oxygen Deficient Atmosphere	An atmosphere containing less than 19.5 percent oxygen by volume.
Oxygen Enriched Atmosphere	An atmosphere containing more than 23.5 percent oxygen by volume.
Operator	A person trained, authorized and engaged in the operation of specific unit.
Personal Fall Arrest System (PFAS)	A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, and a body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.
Personal RF Monitor	Is a device used to measure and monitor the EME (Electromagnetic Energy) in an area within a defined frequency range.
Platform	A working space for persons elevated above the surrounding floor or ground, such as a balcony or platform, for the operation of machinery and equipment.
Positioning System	The act of supporting the body with a positioning system for the purpose of working with hands free. (*Positioning is never considered fall protection)
Positive Locking System	Is a system that creates a mechanical means of ensuring that the connection or interface between two components can never slip.
Powered Lowering	Is The act of controlled lowering of a load by the use of a system or device in the power train, which can control the lowering speed of the winch assembly.
Positioning Lanyard	A lanyard used to transfer forces from a body support to an anchorage or anchorage connector in a positioning system.
Powder Actuated Tool	A tool or machine, which drives a stud, pin, or fastener by means of an explosive charge.
Public	All persons and property not affiliated with the construction project. This includes invitees to the construction project who are not employed by the project constructor or contractors.
Qualified Electrician	A holder of a journeyman's certification in the electrical trade or an apprentice in the trade while under the supervision of a journeyman. Or the holder of a journeyman's certificate in the power lineman trade or an apprentice in the trade while under the supervision of a journeyman.
Qualified Engineer	Is a professional engineer knowledgeable and experienced in the Communication Structures Industry.
Qualified Person	One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
Rated Capacity	The maximum load that a piece of hoisting equipment is designed to carry. Also, the maximum load that an industrial truck or a sling, hook, shackle, or other rigging tackle is designed to carry. At the option of the user, a rated capacity can be assigned that is less than the design-rated capacity.
Reduced Visibility	Times when normal visibility is reduced because of adverse weather conditions such as fog, heavy rainfall, snow, dawn or dusk.
Remote Work Place	Means a workplace for which the ambulance response time is more than two hours.
Repair	There placement or restoration of worn, damaged or broken parts, components or accessories. (Repair is not maintenance or alteration.)
Rescue	Is the process of removing a person from danger, harm, or confinement to a safe location.
Retraining	Is a combination of classroom and on the job instruction required for continued retention of previously learned materials or skills.
Rigging	Is the action of a worker using; cables, shackles, slings, blocks, gin pole, load line, jump line, tag line, etc. used in the applicable work.

Rigging Plan	Is a systematic and detailed presentation showing the equipment and procedures required for a construction process that will provide for the safety of personnel and for the stability of the structure and lifted components.
Rope Grab	A deceleration device, which travels on a lifeline and automatically frictionally, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/lever locking, or both.
Safety Data Sheet *(SDS)*	Is a written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.
Self-retracting Lifeline/lanyard	A deceleration device, which contains a drum, wound line, which may be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.
Scaffold	Any temporary elevated platform (supported or suspended) and it's supporting structure (including points of anchorage), used for supporting employees or materials or both.
SCBA	Self-Contained Breathing Apparatus
Shall	Mandatory.
Should	Recommended.
Slings	Wire ropes, chains, synthetic web, and metal mesh made into forms, with or without fittings, for handling loads.
Softners	Protection materials used to prevent damage to slings or loads where slings pass around sharp corners of objects being hoisted.
Snap-Hook	A connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snap-hooks are generally one of two types: 1. The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection, or 2. The non-locking type with a self-closing keeper, which remains closed until, pressed open for connection or disconnection.
Special Engineered Lift	Is a lift outside the parameters of a published Load Chart requiring special calculations.
Sorting Hooks	Hooks on rigging (spreaders) that have long tapered ends so as to fit into bolt holes for lifting material during a sorting operation. Usually there is no safety latch and therefore they are not used for hoisting.
Staging Area	Locations where workers, work vehicles, equipment or material are assembled prior to work.
Standards	An established measure, type, model, or example that has been accepted and recognized in the industry, usually either ANSI or ANSI.
Standard First Aid Certificate	Means the certificate issued by an approved organization for successful completion of a two day first aid course.
Synthetic Rope	Is a compact but flexible, torsionally balanced, continuous structure of fibers produced from strands that are twisted, plaited, or braided together.
Tag Line	Is a line used to control a load and to maintain clearance between the load and the structure or gin pole.
Tag Line Angle	Is the angle between the horizontal and the tag line at grade.
Testing (confined Spaces)	The process by which the hazards that may confront entrants of a confined space are identified and evaluated. Testing includes specifying the tests that are to be performed in the confined space.
Tie-Off	The act of an employee, wearing personal fall protection equipment, connecting directly or indirectly to an anchorage. It also means the condition of an employee being connected to an anchorage.
Tilted Gin Pole	Is a gin pole that usually rotates from the base and tilts from vertical like a Chicago boom.
Toe Board	A barrier secured along the sides and the ends of a platform unit to guard against the falling of material, tools, and other loose objects.
Top Rail	The uppermost horizontal rail of a guardrail system.
Tower	A structure designed primarily to hold telecommunication equipment.
Track	Is a device or system used to guide and support gin poles during the raising and lowering process.
Training	Is field, classroom, guild, apprenticeship or other instruction from a person skilled in the subject matter. Any combination of these exposures may be suitable to consider a person trained or qualified. The ability to demonstrate and converse intelligently about the subject

	matter are indicators of satisfactory training.
Training Provider	Is any person, organization or other entity performing a training program activity.
Training on the Job	Is any practical activity for trainees to gain, improve, or retain specific knowledge, skills or abilities.
Travelling Block	Is a block that travels with the lifted load used in multiple load line configurations to gain a mechanical advantage.
Trial Lift	Testing a specified load weight from ground level to the location of where personnel or equipment are to be hoisted.
Two-Blocking	An unsafe condition that occurs on a system when the overhaul ball, hook block or headache ball on the load line comes in contact with the main load sheave.
Unprotected Edge	The side or edge of a floor, platform, roof, ramp, runway or other walking/working surface (except at a point of access or exterior trench) where no barrier 39 or more inches high exists.
User	The person or persons having care, custody or control of the equipment at the site.
Utility	Any public or private facility used in the supply, transmission, distribution, or storage of electrical energy, water, sewage, gas, chemicals, steam, or petroleum products, or in the transmission of communications, or for public transit facilities.
Utility Identification Services	Underground utilities mapped by inducing a signal onto a subsurface utility and tracing the signal as it moves along or within the utility.
Verify	To establish the truth, accuracy, or reality of the condition in question.
Vertical or Near Vertical Gin Pole	A gin pole with a mast tilt angle less than or equal to 1.5 degrees (equivalent to a 6.25 inches horizontal offset at bridle for a 20 feet span between the bridle and basket or 11 inches for a 35 feet span).
Violence	Is the attempt or actual exercise by a person, other than the worker, of any physical force so as to cause injury to a worker, and includes any threatening statement or behavior which gives a worker reasonable cause to believe that he or she is at risk of injury.
Wall Opening	A gap or void at least 30 inches high and 18 inches or more wide in any wall or partition through which persons may fall to a lower level, such as doorways, chute openings, or rigging openings.
Warning Line System	A system erected on a roof to warn employees that they are approaching an unprotected roof edge, side or opening.
Weatherproof	So constructed or protected that exposure to the weather will not interfere with successful operation. Rainproof, rain tight, or watertight equipment can fulfill the requirements for weatherproof where varying weather conditions other than wetness, such as snow, ice, dust, or temperature extremes, are not a factor.
Wedge Socket	Is a wire rope end fitting, used to make an end termination by wedging the wire rope cable in a matching fitting.
Winch Assembly	A device with a cylindrical drum with end flanges, shaft, shaft support, gears, brakes that uses a wire rope to lift or lower items.
Wire Rope	Is a flexible cable consisting of a plurality of wire strands helically laid about a center core.
Working Alone	Work alone at a worksite as the only worker at the worksite, in circumstances where assistance is not readily available to the worker in the event of injury, ill health or emergency.
Working Load Limit (WLL)	Is the maximum permissible load accounting for the applicable safety factors an item can sustain in a particular configuration or application.