



Corporate

CONTRACTOR SAFETY PROGRAM MANUAL

EDITION 03/09



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INTRODUCTION

H-E-B's objective is to emphasize that protecting people and property are of paramount importance to the success of The Project. "The Project" is defined as any location referenced in the construction documents. Incidents at The Project can be controlled and prevented through safe work practices. The General Contractor and Subcontractors of any tier and each of their employees are responsible for safety at The Project.

Active participation by the General Contractor and Subcontractors of any tier in all Project safety and loss prevention programs is mandatory. The General Contractor and all Subcontractors of any tier must demonstrate to their employees, their complete support and continuing involvement in all safety and loss prevention programs.

DEFINITIONS

CONSTRUCTION CONTRACT: The written agreement between H-E-B and General Contractor or between General Contractor and their prime Subcontractors and their Subcontractors of any tier.

CONTRACTOR(S): Any individual, firm, or corporation undertaking construction or other services under a contract with either H-E-B, General Contractor or Subcontractor of any tier to furnish labor, services, materials and/or equipment, and/or to perform operations at or from The Project site.

CONTRACTOR (Designated) SAFETY COORDINATOR: The individual assigned by the Contractor or Subcontractor to perform the onsite safety duties.

DRUG TESTING: Includes five panel testing and alcohol testing.

EMPLOYER: Any insured performing work under contract at the job site.

GENERAL CONTRACTOR: The individual, firm, or corporation entering into a contract with Owner.

JOB SITE: The premises owned by H-E-B as described in the Contract between H-E-B and/or General Contractor and/or areas and ways contiguous thereto, including any approved work sites set up by H-E-B for use by an insured exclusively for storage or staging of material or equipment.

OFF-SITE: Any premises *outside* the fenced property of the job site.

ON-SITE: The premises *within* the fenced property of the job site.

OWNER: H-E-B Grocery Company

PROJECT: The construction of The Project, as further described in the Contract between H-E-B and General Contractor.

PROJECT MANAGER (TBD): The individual assigned by the General Contractor with overall project responsibility.

PROJECT SAFETY COORDINATOR (TBD): The individual assigned by the General Contractor that supervises all of the Subcontractors to ensure safety at the job site.

PROJECT SAFETY PROGRAM: The manual that identifies the requirements for The Project's safety and loss prevention program as established by the General Contractor.

PROJECT SUPERINTENDENT (TBD): The individual assigned by the General Contractor who supervises all Subcontractors at the job site.

SUBCONTRACTOR: Any individual, firm, or corporation entering into a contract with contractor.

CONTRACTOR'S SAFETY AND LOSS PREVENTION PROGRAM

The General Contractor shall ensure that each Subcontractor's bid includes the cost to maintain a safety and loss prevention program that meets or exceeds the requirements contained in The Project Safety Program.

The General Contractor will have a Project Safety Coordinator. This individual will be a technical advisor to the General Contractor's project management team and will be responsible for monitoring Subcontractors' compliance with all safety and loss prevention programs. **The Project Safety Coordinator has authorization to stop any work that may stem from non-compliance with safety procedures.**

Each Subcontractor will be solely responsible for carrying out their safety and loss prevention program. Each General Contractor, Contractor and Subcontractor shall designate an on-site Safety Coordinator who has the responsibility for safety. The General Contractor, Contractor and Subcontractor Safety Coordinator is responsible for directly overseeing the Subcontractor's employees to ensure that the Subcontractor's programs and actions adhere to and comply with the minimum safety standards as required by federal, state, and local codes and regulations, and The Project Safety Program.

CONTRACTOR'S SAFETY AND LOSS PREVENTION PROGRAM ELEMENTS

While it is the responsibility of each individual to work safely, it is ultimately the responsibility of the General Contractor to see that all safety and health rules and practices are followed and enforced.

Safety should never be sacrificed for production and must be considered an integral part of the planning process. Our goal and your goal, as a contractor or subcontractor on The Project is to eliminate incidents. Each contractor and all subcontractor of every tier are charged with the responsibility for developing, adhering to, and enforcing their safety and loss prevention programs in accordance with the H-E-B Construction Safety Program.

ORIENTATIONS

Each employee of all General Contractors, Contractors, and Subcontractors will be required to attend a safety orientation before being allowed to work on the job site.

SAFETY EMPHASIS POINTS

It is important that all General Contractors, Contractors and Subcontractors follow the safety guidelines listed in The Project Safety Program and all federal, state, and local safety regulations and ordinances. However, some of the most critical of these for various trade groups have been identified and listed in Form 14. These are the safety-related activities that The Project Safety Coordinator will be monitoring most closely.

The Safety Emphasis Points for each trade group are listed. There is some overlap because there are some items that are pertinent to all personnel working on the jobsite. The Project Safety Coordinator and safety personnel from the insurance broker and insurance carrier will be using these Safety Emphasis Points in the format shown in Form 14 to evaluate safety on the job site.

When these personnel walk through the site, they will note the number of occasions they see for the activity to be performed and the number of times the activity was performed according to the safety emphasis point being measured. For example, if there were ten workers in an area and seven of them had hardhats, that would be marked seven "Yes" and three "No". The score would be 70%. Scores will be posted in various areas for workers to see how the site is performing. If there was no opportunity to observe a particular point, it will be marked, "Not Observed".

CONTRACTORS are encouraged to congratulate their employees when they receive a high score and use the scores in conjunction with any safety incentive programs they may be running on the site.

SELF-INSPECTIONS

General Contractors, Contractors and Subcontractors will make regular inspections of work areas on at least a daily basis. The General Contractor, Contractor and Subcontractor Safety Coordinator or the superintendent/ foreperson may perform these inspections. Whenever possible, corrections should be made on-the-spot. Those deficiencies

which cannot be corrected immediately should be noted in writing for immediate follow-up by The Project Safety Coordinator.

The purpose is to strengthen the safety program and prevent losses. It is also a time to point out physical hazards (i.e., unprotected floor openings, etc.) and unsafe acts (i.e., personal protective equipment, etc.) that can be improved or corrected before an accident occurs. It is an ideal time to compliment those who are doing their jobs safely and well. Inspection tours also allow the CONTRACTOR to review job progress, equipment/ manpower usage and housekeeping. The benefits may extend beyond pure safety issues.

SAFETY RESPONSIBILITIES

It is imperative that all parties on the JOB SITE work together as a team. Each party must fully understand his or her specific safety responsibilities and perform accordingly. All parties are expected to meet the letter and intent of the responsibilities listed in these Project Safety Program.

General Contractors, Contractors and Subcontractors, when on the JOB SITE, will be responsible and accountable to the PROJECT SAFETY COORDINATOR on-site. CONTRACTORS will comply with the safety standards established by the OWNER, The Project Safety Program and applicable federal, state and local regulations.

1. As the OWNER, H-E-B requires all General Contractors, Contractors and Subcontractors to provide a safe, healthy workplace for personnel involved in the project, the general public, property, equipment and the environment. The policy and programs documented in these guidelines have been developed for that purpose. **The OWNER requires that the guidelines be followed by each GENERAL CONTRACTOR, CONTRACTOR, SUBCONTRACTOR and their employees working on The Project.**
2. The PROJECT SAFETY COORDINATOR will advise the OWNER who will be responsible for enforcing CONTRACTOR compliance with these safety guidelines. The PROJECT SAFETY COORDINATOR will serve as an advisor for safety management-related activities on-site. These responsibilities may include:
 1. Requiring that each CONTRACTOR submit a written safety program which describes Job Specific Hazard Control and identifies a Safety Coordinator and enforcement policy. Use of The Project Safety Program satisfies compliance of submitting a written safety manual.
 2. Reviewing CONTRACTOR'S safety program.
 3. Participating in safety meetings with CONTRACTOR Safety Coordinators.
 4. Cooperating with the OWNER and the Safety Compliance Officers.
 5. Monitoring each CONTRACTOR'S activities for compliance with applicable federal, state and local regulations and The Project Safety Program.
 6. Ensuring that CONTRACTOR'S provide all new employees with a proper safety orientation.
 7. Requiring each CONTRACTOR to perform Incident Analysis and submit their findings via written reports.
 8. Assist CONTRACTORS with Incident Analysis involving mishaps of a relatively serious nature.
 9. Communicating information to CONTRACTORS regarding unusual hazards that may arise during the course of the project.
 10. Instructing CONTRACTORS as to specific areas of the project which should be avoided because of existing hazards or potential interference with work currently in progress.
 11. Reporting unsafe conditions or practices observed to the OWNER. Authority is given to "stop work" in imminent danger cases.
 12. Monitoring injury record keeping as required by the federal, state or OSHA regulations and insurance carrier needs.
 13. Verifying that adequate first-aid supplies and personnel are available.
 14. Assuring that an emergency/contingency plan has been developed and that designated personnel are properly trained. Such planning includes emergency evacuation of the JOB SITE and coordination with public medical assistance.
 15. Assuring pre-job planning incorporates employee/public safety as part of construction management.
 16. Prepare a written spill and leak contingency plan and a written waste disposal plan for hazardous and non-hazardous material. These plans shall identify the CONTRACTOR representative in charge of these plans.

17. Requiring all CONTRACTORS and SUBCONTRACTORS to maintain project injury experience records which are 40% better than the Bureau of Labor Statistics' (BLS) frequency/severity rates for their Standard Industry Classification (SIC) Code. If a CONTRACTOR or SUBCONTRACTOR fails to meet this requirement, they will be required to submit a written recovery plan to The Project Safety Coordinator describing how they will reduce injuries and illnesses.
18. Requiring all CONTRACTORS and SUBCONTRACTORS to submit a written "Substance Abuse Program" which meets the guidelines of the project Substance Abuse Program.

Each GENERAL CONTRACTOR, CONTRACTOR, AND SUBCONTRACTOR will have in place, before work begins, a safety program meeting or exceeding The Project Safety Manual. To maintain a uniform safety program, each GENERAL CONTRACTOR, CONTRACTOR AND SUBCONTRACTOR will conform to the described procedures and forms in this program.

Each General Contractor, Contractor and Subcontractor shall be responsible for complying with and executing the safety, sanitary, fire protection and control and medical requirements prescribed by The Project Safety Program, and federal, state and local regulations.

Each general CONTRACTOR, contractor, and subcontractor will designate in writing an on-site Safety Coordinator who will be responsible for the following duties:

1. Each representative will attend or show proof that they have attended the OSHA 10-hour Outreach course.
2. Reviewing and fully understanding the site safety programs.
3. Maintaining a written safety program manual. (Including Haz-Com program)
4. Coordinating medical service availability with The Project Safety Coordinator.
5. Establishing first-aid procedures and coordinating with off-site medical services.
6. Providing documentation of their employees on site who are certified in First Aid and CPR.
7. Maintaining the safety and first-aid records required by federal, state and local laws and providing these monthly to The Project Safety Coordinator.
8. Conducting and documenting weekly safety meetings with employees on-site.
9. Reviewing weekly safety meeting reports and attendance sheets to ensure that the meetings are effective and being held on a weekly basis.
10. Provide documentation of their on-site Safety Coordinator.
11. Distributing safety and health information to employees on-site.
12. Attending general project safety meetings.
13. Providing consultation on safety issues to employees and Subcontractors on-site.
14. Performing documented daily safety inspections of their employee operations. Documenting recommendations and follow-up measures to ensure corrective action is being taken on non-compliant safety issues.
15. Performing documented follow-up inspections on non-compliance issues.
16. Analyzing and evaluating incidents and preparing incident reports.
17. Performing on-site safety reviews and critical activities audits.
18. Documenting that all employees have completed project Safety Orientation Training (completed Form 10, Orientation Documentation).
19. Cooperating with the OWNER representatives, Project Safety Coordinator, government officials, insurance company representatives and consultants designated by the OWNER.
20. Ensuring that employees follow all project safety rules, including the wearing of appropriate personal protective equipment.
21. Submitting a written recovery plan to The Project Manager if the CONTRACTOR'S or its SUBCONTRACTORS' project accident experience places them lower than the top 40 percent of the Bureau of Labor Statistics' (BLS) frequency/severity rates.
22. Comply with the project spill and leak contingency plan.
23. Submitting a written "Substance Abuse Program."
24. Submitting the required documentation on their employees per the "Substance Abuse" section of this Safety Manual.

Each general CONTRACTOR, contractor and SUBCONTRACTOR of all tiers will be responsible for the safety and health of their employees as well as other workers; the protection of equipment, materials and structures; and protection of the general public and environment.

Each SUBCONTRACTOR will designate an on-site Safety Coordinator to act as the safety liaison with the GENERAL CONTRACTOR and Project Safety Coordinator, and maintain safe working practices and conditions. The SUBCONTRACTOR'S Safety Coordinator will be responsible for ensuring that their personnel comply with the Job Safety Guidelines as well as all applicable federal, state and local regulations. The duties of the SUBCONTRACTOR Safety Coordinator include:

1. Implement and maintain the safety program, Haz-Com Program and MSDS files.
2. Understanding established first-aid procedures and coordinating with off-site emergency medical facility services.
3. Maintaining safety and first-aid records.
4. Participating in weekly safety meetings with on-site employees.
5. Distributing safety and health information to on-site employees.
6. Performing on-site safety reviews and critical activities audits.
7. Performing follow-up safety inspections of non-compliance issues.
8. Analysis and evaluation of incidents and preparing incident reports.
9. Accompanying safety and compliance officers on-site.
10. Ensuring that all SUBCONTRACTOR employees have proper safety orientation and training.

EMPLOYEES - All GENERAL CONTRACTOR, CONTRACTOR AND SUBCONTRACTOR employees are responsible for understanding and complying with all safety and health requirements that affect them on The Project. It is each employee's responsibility to support the employer and the project by providing a safe place to work and protect themselves, all co-workers, and the public from injury or illness.

Each employee will be responsible for reporting identified safety or health hazards on the job to their supervisor or Safety Coordinator. Employees shall also report all incidents occurring on the job which may result in, or have potential for, loss. Employees shall cooperate and assist in the investigation of all incidents. Employees shall cooperate and assist in determining proper safety measures for preventing recurrence.

VENDORS AND VISITORS - The GENERAL CONTRACTORS, CONTRACTORS AND SUBCONTRACTORS are responsible for ensuring that all on-site vendors and visitors follow the established safety procedures in this document. The OWNER shall post signs accordingly in conspicuous places to notify vendors and visitors of these safety procedures.

The CONTRACTORS shall require that all visitors and vendors sign in at the JOB SITE office and provide their name, firm, purpose of visit and time of arrival. CONTRACTORS must require each visitor or vendor to sign out when leaving the JOB SITE. Each vendor and visitor will sign a "General Release Form" (Form 9) before being allowed on the project.

Vendor compliance is the responsibility of the CONTRACTOR coordinating the vendor services. Vendors will provide proper personal protective equipment for their employees and will enforce their use whenever on-site. Vendor non-compliance will not be tolerated. The CONTRACTOR coordinating the vendor service will be responsible for correcting the violation immediately or removing the vendor from the site.

The CONTRACTOR must arrange for visitors to be escorted while on the JOB SITE. The representative appointed to escort visitors will be responsible for explaining the safety program as it applies to visitors. Visitors must be briefed on the potential hazards of the area visited and provided with appropriate personal protective equipment. All visitors will be required to wear hard hats and sturdy shoes while on-site. Tennis shoes, sandals, open toe shoes, and high heel shoes are strictly forbidden. Eye protection and/or ear protection must be worn where warranted.

Damages, costs, expenses or other losses caused by a vendor or visitor may be charged back to the CONTRACTOR responsible for bringing the vendor or visitor on-site.

Enforcement of these policies regarding vendors and visitors is the responsibility of the CONTRACTOR.

ENFORCEMENT POLICY

The OWNER will hold each General Contractor, Contractor and Subcontractor accountable for complying with the specific provisions and intent of these safety guidelines. Each General Contractor, Contractor and Subcontractor will be responsible for designating an on-site Safety Coordinator who will be responsible for guideline compliance.

Each CONTRACTOR will advise employees that unsafe acts or conditions will not be tolerated and that violators will be subject to the following actions:

1. 1st violation - Verbal Warning (documented) with a witness present, advising the offender of the nature of the violation.
2. 2nd violation - Written Warning to employee, Foreman, and Employer
3. 3rd violation - Written Warning with 3-Day Suspension.
4. 4th violation or willful disregard to safety guidelines - Written Warning and Removal from any H-E-B job sites.

IN THE EVENT OF IMMINENT DANGER, WORK SHOULD BE STOPPED IMMEDIATELY.

Should such non-compliance and/or unsafe practices be allowed by any GENERAL CONTRACTOR, CONTRACTOR, SUBCONTRACTOR or vendor, appropriate action will be taken by the OWNER.

HEALTH SERVICES

Injured parties requiring emergency treatment will be transported to health facilities in the most expeditious manner, including ambulance or paramedic units.

Each CONTRACTOR must maintain the required OSHA Form 300 Log and the First-Aid Log. Both logs shall be available for review by the OWNER, its Consultants, Insurance Carriers and appropriate regulatory authorities.

First-aid kits should be provided by all CONTRACTORS, vendors and other parties on-site. Kits should be kept in offices, vehicles storage or warehouse facilities and other structures erected for the duration of the project.

CONTRACTOR employees designated to provide first-aid (minimum of 2 per Contractor) on The Project are required to be trained in the Bloodborne Pathogen Standard and cardiopulmonary resuscitation (CPR). Each CONTRACTOR will provide a list of those trained personnel and will post it on the appropriate bulletin board.

ORIENTATION PROGRAM

General Contractor, Contractor and Subcontractor will complete their own orientation program for all employees working at this site, including safety training for general and job-specific operations. In addition, a site orientation will be required. The site orientation will cover the following as a minimum.

1. PERSONAL PROTECTIVE EQUIPMENT

Proper Personal Protective Equipment such as Hard Hats, Eye Protection, Work Style Boots or Shoes, Pants with full leg coverage and Shirts with sleeves at least 4" in length will be required for all employees on the project

2. SAFETY PROGRAM

The initial orientation will include a review of The Project Safety Program, Safety Emphasis Points and critical activities which apply to the new employees work. The safety philosophy of the OWNER should also be included.

3. HAZARD COMMUNICATION PROGRAM

Employees must be made aware of the OSHA Hazard Communication Standard, the written Hazard Communication Program, the location of the Hazardous Materials Inventory and Material Safety Data Sheets (MSDSs) how to use MSDSs, and specific chemical precautions unique to their jobs.

4. ACCIDENT PREVENTION

All personnel will be trained in the potential hazards involved in their jobs and the appropriate precautions associated with these hazards. This may be followed by a brief tour of their respective work areas; introductions to their foremen, supervisors, and fellow workers; and instructions for their initial work assignment.

5. SUBSTANCE ABUSE POLICY

All personnel must be aware of the “*Substance Abuse and Weapons Policy*” in place.

General Contractor, Contractor and Subcontractor will have implemented a written Substance Abuse Program to provide a safe and healthy workplace for all employees. Substance abuse in the workplace can cause accidents and affect job performance. Any person found using, selling or possessing illicit drugs or alcohol in the workplace will be subject to termination. Any employee causing or involved in an incident resulting from substance abuse may be subjected to workers’ compensation benefit penalties as stated by the Workers’ Compensation Law.

Employees involved in an incident will be required to take a substance abuse test. H-E-B reserves the right to test employees when reasonable suspicion exists. In case of a “positive” result, a second test will be performed. If a second test is positive, the employee will not be allowed to work on the project.

6. DOCUMENTATION

When the initial orientation is over, the employee should sign and date the “Orientation Documentation Form” (Form 10) to verify that the employee understands the orientation material. A copy should be retained in the individual’s personnel file.

REGULATORY INSPECTIONS

1. SCOPE AND APPLICATION

The owner and all General Contractors, Contractors and Subcontractors on the project will comply with all Local, State, and Federal regulations during the construction of The Project. It is the intent of all to fully cooperate with compliance officers from any and all such agencies.

2. PROCEDURES

In the event that a compliance officer of any regulatory agency (TDH, OSHA, EPA, etc) arrives on the project, they will be required to check in at the General Contractors offices. They will be treated with respect and courtesy while waiting for The Project Safety Coordinator to be called to meet with them.

If a compliance officer is found in the field unescorted, respectfully request that they proceed to the General Contractors offices and contact The Project Safety Coordinator immediately.

The Project Safety Coordinator will notify any and all contractors on site who need to be involved in the inspections or conferences with regulatory inspectors.

Following any regulatory inspection, each contractor who receives a citation will provide a copy of the citation to The Project Safety Coordinator within 24 hours of receipt.

INCIDENT REPORTING PROCEDURES

1. SCOPE AND APPLICATION

This procedure applies to any and all incidents that occur on the project site or as a result of the operations of any contractor working on the project site. Incidents include; injury to personnel working on the site; injury to the public; property damage on the site; or property damage to the public as a result of operations on the site.

2. PERSONAL INJURY

In the event that any employee working at the site is injured as a result of the activities on site, the contractor’s Safety Coordinator shall be notified immediately. The contractor’s Safety Coordinator will be responsible for assessing the situation and ensuring that initial first aid requirements are met and ensure that proper emergency services have been call if needed. Once the situation has been assessed The Project Safety Coordinator will be notified of the injury and status.

Within 24 hours of any employee injury, the contractor will provide copies of the First Report of Injury and Supervisors Incident Report, including cause and corrective action to be initiated, to The Project Safety Coordinator. The Project Safety Coordinator will conduct an incident analysis when deemed necessary and all contractor personnel will cooperate fully with them.

3. PROPERTY DAMAGE

In the event that there is an incident on site that results in damage to property of the owner or any contractor, The Project Safety Coordinator will be notified immediately. The contractor involved will be responsible for the initial analysis of the incident and copies of the Supervisors First Report of Incident will be forwarded to The Project Safety Coordinator within 24 hours of the incident. Contractors will be responsible for filing claims and reports with the insurance company.

4. INJURY OR PROPERTY DAMAGE TO THE PUBLIC

In the event that any incident occurs as a result of operations involved in the work on site the contractor involved will immediately make necessary arrangements for emergency services.

Once emergency services have been contacted the contractor shall contact The Project Safety Coordinator. The contractor involved will conduct the initial analysis of the incident, but The Project Safety Coordinator and Insurance personnel will be included.

SAFETY AND HEALTH RULES AND REGULATIONS

1. GENERAL SAFETY RULES

1. All employers shall review each of the rules which applies to the work their employees are performing for the project.
2. Every new employee will be informed of the safety program. This training will be acknowledged by signing the orientation documentation form.
3. Supervisory personnel shall require all employees working under their jurisdiction to comply with all applicable safety rules.
4. All employees shall assume a fair share of responsibility for their own protection. Personal protective equipment shall be used where required and maintained in proper condition.
5. Employees shall not engage in practical jokes, horseplay, or the urging of persons to take unnecessary chances.
6. Food and Safety Personal Protective Equipment and Precautionary will be adhered in food preparation areas as required by the Health Department.
7. Employees should not undertake work which they are not properly qualified or equipped to do.
8. Use of intoxicating or unlawful substances by any employee during work hours, including lunch breaks, is forbidden; any violation will be sufficient cause for dismissal from the JOB SITE. Employees reporting for work while under the influence of intoxicating or unlawful substances shall not be allowed to assume their duties.
9. Employees shall keep all combustible materials properly stored.
10. Employees shall keep all working areas clear of debris and employees shall not contribute to unsanitary conditions.
11. Employees will abide by all legal, safety and health codes.
12. Employees shall be aware of their environment and avoid hazardous situations around equipment.
13. Supervisory personnel must keep employees aware of their work location.
14. Employees should never work alone in an isolated area, unless arrangements have been made for periodic contact with a supervisor.

2. VEHICLE AND MACHINERY RULES

1. All traffic rules must be followed by each employee when driving on site.
2. Only vehicles covered by Company Auto Insurance will be driven on site.
3. All employees operating company vehicles or machinery shall be properly trained and licensed.
4. Employees are required to observe safety rules and to use adequate safety protective equipment (hearing protection, eye wear, hard hats, respirators, etc.).
5. All work equipment and machinery will be maintained and operated in a safe condition. Backup alarms on heavy equipment will be maintained in a functional condition.
6. All driving or operating areas will be kept free of debris, oil, rags, grease, ropes, chains, tools, etc.

7. Equipment shall not be refueled while the engine is running. Smoking on or in the vicinity of equipment while it is being refueled is prohibited.
8. All operators and drivers are responsible for securing their loads.
9. Employees should inspect the area behind any parked vehicle before backing up.
10. Employees shall not board or dismount moving vehicles.
11. All occupants of a vehicle must use seatbelts when provided.
12. Loose or frayed clothing shall not be worn around moving machinery or equipment.
13. Proper traffic control devices must be used when the vehicle is in a position where traffic flow may be inhibited.
14. Vehicles transporting employees will be equipped with seats and seat belts firmly secured and adequate for the number of employees to be carried.
15. Employees shall not be under the influence of alcohol or drugs.
16. All incidents, injuries or malfunctioning equipment shall be reported immediately to the foreperson/supervisor, and to The Project Safety Coordinator within 12 hours.

3. HOUSKEEPING AND MATERIAL STORAGE

Housekeeping is a primary concern for every CONTRACTOR and every employee throughout the project. Good housekeeping tends to minimize fire potential and reduce potential slip and fall injuries. Housekeeping includes removing debris, materials and equipment from the site as needed and ensuring proper storage of materials and equipment.

4. FLAGGING AND TRAFFIC CONTROL

Flagging and traffic control procedures properly performed during construction operations can contribute to an efficient operation. Standard traffic control measures may be adequate for The Project. Flagging/signaling procedures may need to be used at times. They should be obeyed as in any conventional traffic pattern.

1. Flag persons should understand what the operation involves in order to anticipate traffic demands.
2. Only designated flag persons should be directing traffic, except in emergency situations. They must be alert to traffic conditions and construction operations at all times.
3. Flag persons must never turn their back on traffic.
4. Detours and channeling procedures should be planned and well defined so as to cause no confusion to drivers.
5. Flag persons should be equipped with the proper equipment to perform their job. This includes a good paddle, flagging vest, hard hat and a friendly disposition. They should also give clear and definite signals to control traffic.
6. Flag persons should be firm but courteous at all times.

Any infraction of one or more of the above rules can be grounds for immediate dismissal from the JOB SITE.

TOOLBOX SAFETY MEETINGS

Each General Contractor, Contractor and Subcontractor is required to hold toolbox safety meetings with the entire field staff each week. It is the responsibility of the CONTRACTOR'S Safety Coordinator to conduct and coordinate these meetings. CONTRACTORS not holding safety meetings may attend the safety meetings of another CONTRACTOR, provided that the covered subjects are appropriate to all parties and the CONTRACTOR providing the training approves such attendance.

Topics will vary from week to week and should cover those areas of greatest concern to the immediate audience. All site specific incidents and near misses must be covered.

Attendance should be documented on the "Hazard Analysis/Toolbox Safety Training" (Form 11). Special attention should be given to the fact that all attendees must sign in (typed list of attendees is not acceptable), and that the topic(s) for the meeting must be listed. One copy of the form should be kept in the CONTRACTORS' files, and one copy shall be sent to The Project Safety Coordinator.

SUBSTANCE ABUSE

1. POLICY AND SCOPE

It is the policy of The Project to maintain a safe and healthy work environment for all employees and to promote high quality standards.

1. As part of this policy, controlled substances (unless prescribed by a physician), illegal drugs, and intoxicating beverages are not allowed on the JOB SITE (including parking lots, offices or vehicles).
2. Any employee taking prescribed drugs or over-the-counter drugs which could impair his/her assigned work shall report this fact to his/her supervisor.
3. The use, sale or possession of alcohol or drugs on the premises, or arriving at or returning to work under the influence, will not be tolerated and will be grounds for immediate removal from the Jobsite.
4. This policy applies to all project personnel.
5. **All General Contractors, Contractors, Sub-Contractor, on any level or any tier, must provide H-E-B with a letter listing the names and testing dates of their employees who passed the Drug and Alcohol testing that will be working at the JOBSITE. The letter must be signed by the owner of the company.**

2. PRE-EMPLOYMENT SCREENING

GENERAL CONTRACTORS, CONTRACTORS and SUBCONTRACTORS are responsible to ensure that all employees submit to a scientifically valid alcohol and drug testing procedure (minimum 5-panel drug screening). If an employee has passed a drug test and alcohol test within the past 4 months, per their Employer's Substance Abuse Program, The employee will be allowed to work on the JOBSITE (the employee's name and testing dates must be on the letter provided to H-E-B). If not, the employee must submit to the drug and alcohol tests within 5 days of working at the JOBSITE. Employees refusing to take the test will not be allowed on the JOB SITE. Positive testing will result in a second confirmation test of the original sample. If the confirmation test is positive, the employee will not be allowed on the JOB SITE.

3. POST-ACCIDENT/REASONABLE CAUSE TESTING

Any employee involved in an incident causing personal injury, vehicle, equipment or property damage will be subject to a drug screen. Alcohol testing will be included in this drug screen.

An employee giving project management reasonable cause to believe the employee is under the influence may be asked to take a drug test. Refusal to take the test is grounds for dismissal from the project. Positive testing will result in a second confirmation test of the original sample. If the confirmation test is positive it will be grounds for dismissal or removal from any H-E-B job site and/or project

4. RANDOM TESTING

All employees are subject to random testing throughout the duration of the project.

5. EMPLOYEE COMMUNICATION

Prospective/current/temporary employees are required to read the project "Substance Abuse Policy for Training on Drug Free Work Environment" and acknowledge that:

1. They have read and understand the policy.
2. Positive test results are sufficient grounds for removal from the JOB SITE any H-E-B job site and/or project.
3. The project owner, consultants, and safety personnel are held harmless for the confidential use of test results.
4. Test results, positive or negative, will be released to the employer. Employer will provide list of negative or non-positive results to Project Safety Coordinator.
5. Should the employee dispute the test findings, another test may be conducted on the original sample at the applicant's expense within 24 hours of being removed from the Project and any H-E-B site/project.

WEAPONS/WORKPLACE VIOLENCE

1. POLICY AND SCOPE

Workers on the JOB SITE are expected to display respect toward and cooperation with coworkers and management. Furthermore, workers are to refrain from abusive language, intimidation, threats, assaults, or fighting. No weapons of any type are allowed on the JOB SITE.

2. AGGRESSIVE BEHAVIOR

Workers will be held accountable for aggressive behavior. Workers are required to report all “threatening” behavior to his/her direct supervisor who will then report it to The Project Senior Superintendent. All reports of aggressive or potentially violent behavior will be investigated and, if verified, appropriate responsive action will be taken. Such action could include:

1. Monitoring of the situation.
2. Taking appropriate disciplinary action, including removal from job site.
3. Consulting with local law enforcement officials.

Construction Safety Guidelines

The following construction-specific safety guidelines contain basic safety rules and specific safety responsibilities for ALL General Contractors, Contractors and Subcontractors and personnel on the project. These safety rules, safety guidelines and safety responsibilities are considered minimum requirements and have been included as part of the contract stipulations.

H-E-B will hold CONTRACTORS accountable for following these safety guidelines and accountable for complying with the specific provisions and intent of these safety guidelines. Non-compliance and/or unsafe practices will not be tolerated and will be treated with appropriate action by the OWNER. CONTRACTORS will advise their employees of the Enforcement Policy.

These guidelines should be used as a reference for loss prevention issues, and are not intended to replace applicable federal, state or local regulations or industry standards. Due to the project's size, the guidelines cannot possibly address every loss prevention situation. The scope may be exceeded by each CONTRACTOR'S own loss control plan which incorporates appropriate governmental regulations, industry standards, safety professionals and prudent loss prevention practices specifically applicable to the CONTRACTOR'S area of specialty. H-E-B as the OWNER, places the highest priority on safe operations throughout the life of The Project. H-E-B has developed these safety guidelines to meet regulatory minimums outline specific safety responsibilities for all personnel involved on the project and provide guidance in maintaining a safe and healthy work environment.

Each General Contractor, Contractor and Subcontractor and level of management is expected to provide a safe and healthy working environment for its employees. Each employee is expected to abide by these safety standards and safe work practices while employed. A strong team effort is required to maintain a safe work site and protect fellow employees, the general public, property, equipment and the environment.

HAZARD COMMUNICATION

1. POLICY AND SCOPE

OSHA requires that each employee exposed to potentially hazardous materials be advised of the potential hazards and how to guard against those hazards.

Each CONTRACTOR whose employees are exposed to potentially hazardous materials (including fuels, lubricants, form releases, curing compounds, sealants, paints, coatings, etc.) must develop a list of all such materials used on the project; gather the Material Safety Data Sheets (MSDS) for those materials; develop a labeling system for all materials; and train all potentially exposed personnel in the hazards of and controls for all listed compounds. These steps are outlined in detail in the following material.

2. PURPOSE

The purpose of this program is to protect employees from hazardous materials in the workplace through proper training, labeling and instruction in emergency situations.

3. PROGRAM

Employee training for this requirement should be documented and retained by the CONTRACTOR.

1. Chemical Inventory & MSDS

Every CONTRACTOR shall be responsible for the development and maintenance of a list of hazardous materials utilized within their project operations and will be further responsible for obtaining and maintaining MSDSs for all such hazardous materials. One copy of said list and of each of the MSDSs will be forwarded to The Project Safety Coordinator.

Employees shall be allowed access to this information and the specific MSDSs for materials utilized in their work areas. All questions relating to the program should be directed to The Project Safety Coordinator.

2. Employee Information and Training

All project employees will be given information regarding the requirements of the Hazard Communication Program, the hazardous materials present in their workplace and the physical and health risks of these materials. This requirement may be met most easily by a general training class for all potentially exposed personnel, through orientation sessions for new employees, and refreshers during toolbox talks.

The information and training shall also include the following elements:

- a) The symptoms of overexposure to specific hazardous materials.
- b) How to determine the hazardous presence/release of a material in the workplace.
- c) Methods to reduce or prevent the exposure to hazardous materials, such as control procedures, work practices or personal protective equipment.
- d) Procedures to follow in the event of an exposure to hazardous materials.
- e) The locations of the MSDSs which apply to their workplace and the location of the written Hazard Communication Program.
- f) How to review MSDSs to obtain the hazard information for the material, and how to read the labels which are required on the chemical containers.

When a new hazardous material is obtained, each employee who could be exposed shall be given the information and training as described above. A copy of the MSDS shall be obtained and distributed to The Project Safety Coordinator prior to actual use of the material. MSDSs shall be available to all employees during each work shift.

3. Container Labeling

The CONTRACTOR'S Safety Coordinator shall verify that all chemical containers received by the CONTRACTOR at the site are clearly labeled as to the contents, the hazards involved and the name and address of the manufacturer.

The CONTRACTOR'S Safety Coordinator shall ensure that all secondary containers of hazardous materials are clearly labeled with the same information as the original container.

4. Non-Routine Tasks

In the event that an employee is assigned a non-routine task, the employee will be given information and training related to the hazardous materials which may be encountered in the non-routine task. This will be provided by the first-line foreperson or CONTRACTOR's Safety Coordinator. This information will include:

- a) The potential specific hazards of the material.
- b) The controls and protective measures required.
- c) The types of personal protective equipment required.
- d) How to use the equipment.
- e) The nature of other work being performed.

- f) Emergency procedures involved with the task.
5. Contractor Information
The CONTRACTOR'S Safety Coordinator is responsible for providing information on hazardous materials that other CONTRACTOR employees may be exposed to on the JOB SITE and the control precautions required. This information will be disseminated prior to the CONTRACTOR starting work on the JOB SITE.
6. Audit and Review
It shall be the CONTRACTOR'S responsibility to review the Hazard Communication Program on at least a quarterly basis. The purpose of this review is to revise and update the program to reflect all changes (i.e., purchase, use, storage and handling of hazardous materials) on the site.
It shall further be the responsibility of the CONTRACTOR'S Safety Coordinator to periodically audit procedures in the use of hazardous materials and to institute corrective actions in order to meet the requirements set forth in the MSDSs.

PERSONAL PROTECTIVE EQUIPMENT

1. POLICY AND SCOPE

The use of personal protective equipment for protection from identified hazards will be mandatory under the following conditions:

1. Where required by law.
2. Where the work has the potential for injury or illness to an employee.

The requirements pertaining to personal protective equipment shall apply to all locations of the project, whether permanent or temporary. It is the CONTRACTOR'S responsibility to provide personal protective equipment and to ensure its proper use wherever necessary.

2. PURPOSE

To reduce the potential for injuries or detrimental affects on health, which are not controllable by engineering or administrative means, to all employees.

3. USE REQUIREMENTS

1. Eye and Face Protection
Safety glasses with side shields are to be worn at all times. The use of face shields is mandatory where there is exposure to a work process that has been identified as a hazard with potential for injury to the eyes or face. This may include, grinding, chipping, sanding, sandblasting, use of chemicals, etc.
Employees involved in welding operations shall be furnished with filter lenses or plates of at least the proper shade and number.
Safety glasses and side shields must conform to the American National Standards Institute (ANSI) Standard Z87.1 for Occupational Eye and Face Protection.
2. Hearing Protection
Whenever engineering or administrative controls fail to reduce sound levels to within OSHA specifications, hearing protection devices must be worn and must conform to all applicable federal, state and local safety and health regulations
3. Head Protection
Hard hats are required in all construction areas. The head protection devices shall meet the specifications contained in the ANSI Standard Z89.1, Class B and C Requirements for Industrial Head Protection.
Hard hats for the protection of employees exposed to high voltage electrical shock and burns shall meet the specifications contained in ANSI Z89.2.
4. Respiratory Protection
Operations that require respiratory protection will comply with applicable OSHA standards.

5. Fall Arrest Systems

Where employees are exposed to falls of 6 feet or greater and no other means of fall protection is available, the use of fall arrest equipment will be required. Fall arrest systems shall consist of a full body harness, dual shock absorbing lanyards (100% TIE OFF) and anchorage. All fall arrest system components shall meet the requirements of 1926.500. **Any device actually subjected to loading, other than static testing, shall be immediately removed from service and replaced as an employee safeguard.**

The selection, use, and maintenance of the employee safeguard devices shall conform to all applicable federal, state and local safety and health regulations.

6. Foot Protection

Substantial leather work style footwear will be worn by all employees working on the project site (excludes office area). Tennis shoes (or other athletic style), sandals and high heels are specifically prohibited in field work areas.

7. Special Equipment

As stated, the use of personal protective equipment will be deemed mandatory when the hazard cannot be controlled at the source. This shall apply to the use of special protective equipment such as gloves, aprons, sleeves, shoes/boots and hoods. When it has been determined through actual experience, statistical analysis or compliance requirements that the use of special protective equipment is needed to provide the hazard control, this mandatory use requirement shall apply.

8. The mandatory use of personal protective equipment will apply to all visitors.

9. Proper Dress for Work

In all cases, personnel will wear full-length pants and a sleeved shirt or blouse whenever working on the JOB SITE.

CONFINED SPACE ENTRY PROGRAM

1. SCOPE AND APPLICATION

This program covers all employees working on site who may enter confined spaces during the course of work.

2. PURPOSE

This standard establishes requirements for practices and procedures to protect employees from the hazards of entry into permit-required confined spaces (permit spaces).

3. GENERAL SAFETY PROCEDURES

1. Each CONTRACTOR must establish and maintain an effective confined space entry procedure which complies with OSHA Standard 1910.146. A copy of the confined space entry procedure must be submitted to The Project Safety Coordinator prior to beginning work at the site.
2. All CONTRACTOR employees must be trained to identify confined spaces and know the appropriate protective measures which must be taken to ensure safe entry and egress. All employees must know the nature of the hazards involved in confined spaces. All employees must know, understand, and follow the confined space entry procedures. The necessary personal protective equipment for employees entering confined spaces must be provided and used.
3. CONTRACTOR employees must enforce all provisions of the confined space entry procedures. A confined space entry permit will be provided and used for each entry. Only authorized, competent persons shall evaluate, monitor, and approve confined space entry.

4. DEFINITIONS

1. Confined Space: A space that is large enough that employees can enter and perform assigned work, and:

- a) Has limited or restricted means of entry or exit.
- b) Is not designed for continuous employee occupancy.
- 2. Hazardous Atmosphere: An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue, injury or acute illness from one or more of the following:
 - a) Flammable or explosive atmosphere in excess of 10.0% of the lower flammable limit (LFL) or lower explosive limit (LEL).
 - b) Combustible dust concentrations in excess of its LEL.
 - c) Oxygen content less than 19.5% or greater than 23.5%.
 - d) Exposure above the OSHA PEL (Note - An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury or acute illness due to its health effects is not covered by this Standard).
- 3. Non-Permit Confined Space: confined space that does not contain or, with respect to atmospheric hazards have the potential to cause death or serious physical harm.
- 4. Permit-Required Confined Space: confined space that has one of the following characteristics:
 - a) Contains or has the potential to contain a hazardous atmosphere.
 - b) Contains a material that has the potential to engulf an entrant.
 - c) Has inwardly converging walls or floor that taper to a smaller cross section that could trap or asphyxiate an entrant.
 - d) Contains any other recognized serious safety or health hazards.

5. GENERAL REQUIREMENTS

- a) The OSHA Standards Require Employers to:
- b) Identify Permit-Confined Spaces (See the Standards, 29 CFR 1910.146 and ANSI Z117.1 - 1989).
- c) Inform employees that the workplace contains permit spaces.
- d) Develop a written permit program and make it available to employees.
- e) Establish alternative procedures for entry into non-permit confined spaces.
- f) Establish requirements for employers that have confined spaces but choose not to enter.
- g) Establish employer responsibilities to CONTRACTORS.

6. PERMIT-REQUIRED CONFINED SPACE PROGRAM

This paragraph establishes the required elements of the written program required by the Standard. Your program should:

- 1. Prevent unauthorized entry.
- 2. Identify and evaluate the hazards of the space.
- 3. Specify acceptable entry conditions.
- 4. Describe procedures for isolating the space.
- 5. Explain how to eliminate or control atmospheric hazards.
- 6. Protect entrants from external hazards.
- 7. Verify that conditions in space remain acceptable throughout entry.
- 8. Ensure that the space atmosphere is tested before and during entry (See Appendix A).
- 9. Ensure that employees have, and know how to use and maintain, the following equipment:
 - a) Testing and monitoring equipment.
 - b) Ventilation equipment.
 - c) Communication equipment.
 - d) Personal protective equipment.
 - e) Lighting equipment.

- f) Barriers and shields.
 - g) Ladders.
 - h) Rescue and emergency equipment.
 - i) Any other equipment necessary.
- 10. Establish duties of attendant for entry.
 - 11. Designate authorized entrants, attendants, entry supervisors and atmosphere tester.
 - 12. Identify the duties of entrants, attendants, entry supervisors and atmosphere tester.
 - a) Emergency Procedures
 - b) Multiple entries - Specify emergency procedures for attendant monitoring more than one space.
 - 13. Provide training for all employees involved in confined space entry as specified in the Standard.
 - 14. Provide procedures for rescue of entrants from confined spaces.
 - 15. Prevent unauthorized personnel from attempting a rescue.
 - 16. Provide a procedure for the preparation, issuance, use and cancellation of entry permits.
 - 17. Coordinate entries involving more than one employer.
 - 18. Review program whenever there is reason to believe it may not adequately protect employees.
 - 19. Review the confined space program annually (using canceled permits) and revise the program as required.

7. PERMIT SYSTEM

This paragraph establishes requirements for the use of the permit system.

- 1. Before entry into a permit space the employer shall:
 - a) Prepare an entry permit.
 - b) Have the entry supervisor sign the permit indicating authorization to enter.
 - c) Make permit available to all entrants at time of entry.
- 2. The employer is also required to:
 - a) Limit the duration of the entry to time shown on permit.
 - b) Terminate entry when work has been completed or when conditions not allowed by the permit arise.
 - c) Note problem encountered during the entry on the permit.
 - d) Retain cancelled entry permits for at least one year.

8. ENTRY PERMIT

This paragraph establishes the requirements for a written permit that conforms to OSHA requirements.

- 1. The Entry Permit shall identify:
 - a) Permit space to be entered.
 - b) Purpose of entry.
 - c) Date and authorized duration of entry.
 - d) Authorized entrants and attendants.
 - e) Name of entry supervisor.
 - f) Signature of authorizing entry supervisor.
 - g) Hazards of the permit space.
 - h) Methods used to control hazards.
 - i) Acceptable entry conditions.
 - j) Initial and periodic air monitoring results
 - k) Rescue and emergency services to be contacted and how to contact.
 - l) Communication procedure to be used to maintain contact between entrants and attendants.

- m) Equipment to be provided for compliance with this standard.
- n) Problems encountered during entry.
- o) Any other additional permits issued (such as hot work in the space).
- p) Any other information necessary to ensure employee safety.

9. TRAINING

1. Employers shall provide training so that all employees whose work is regulated by this Standard acquire the understanding, knowledge and skills necessary for the safe performance of their duties.
2. Training shall be provided:
 - a) Before employee is assigned duties under this Standard.
 - b) Before there is a change in assigned duties.
 - c) Whenever there is a change in space hazards.
 - d) Whenever employer believes entry procedures are not being followed or that employees are unaware of the procedures.
3. Training shall establish employee proficiency in assigned duties.
4. Employers shall certify that employees' required training has been accomplished. The training certification shall include:
 - a) Employee's name.
 - b) Signature of trainer.
 - c) Date of training.

10. DUTIES OF AUTHORIZED ENTRANTS

1. Employers shall ensure that all entrants:
 - a) Know the hazards faced during entry.
 - b) Properly use the equipment required.
 - c) Maintain communication with the attendant.
 - d) Alert the attendants to new hazards or changes in the space.
 - e) Exit from the space when ordered or when dangerous conditions are recognized.

11. DUTIES OF ATTENDANTS

1. Employers shall ensure that each attendant:
 - a) Knows the hazards faced during entry.
 - b) Is aware of behavioral effects that exposure to space hazards may have on entrants.
 - c) Maintains the count and identifies everyone in the permit space at all times.
 - d) Remains outside the permit space. Attendants may be allowed entry for rescue purposes if specified in the permit program and if they have been properly trained and equipped for rescue.
 - e) Communicates with entrants as necessary to monitor entrant status and to alert entrants to evacuate the space if necessary.
 - f) Monitors activities inside and outside space to determine if it is safe for entrants to remain in space.
 - g) Orders evacuation of space when appropriate.
 - h) Summons rescue and other emergency services when entrants may need assistance to escape from the space.
 - i) Warns unauthorized persons to stay away from or exit the permit space.
 - j) Informs entrants and entrant supervisors when unauthorized personnel have entered the space.

- k) Performs non-entry rescues as specified in rescue procedures.
- l) Performs no duties that may interfere with primary duty of monitoring and protecting the authorized entrants.

12. DUTIES OF ENTRY SUPERVISORS

1. Employers shall ensure that each entry supervisor:
 - a) Knows the hazards faced during entry.
 - b) Verifies that entry permit is complete and conditions are acceptable for entry before signing permit.
 - c) Terminates entry when work has been completed or when conditions not allowed by the permit arise.
 - d) Verifies availability of rescue services.
 - e) Removes unauthorized individuals who enter or attempt to enter permit space.
 - f) Periodically determines that acceptable entry conditions are maintained.

LOCKOUT/TAGOUT PROGRAM

1. POLICY AND SCOPE

A job specific lockout and tagout program will be implemented by all CONTRACTORS and vendors on the JOB SITE.

2. PURPOSE

The purpose of this lockout/tagout program is to provide guidance in the control of hazardous energy during servicing and maintenance of machinery, equipment or processes before work begins. For further detail, refer to OSHA CFR 1926.417 & 1910.147.

3. GENERAL REQUIREMENTS

Each CONTRACTOR will be responsible for implementation of the lockout/tagout program. It shall be the responsibility of the CONTRACTOR'S supervisor controlling the work being performed to determine if the system poses any hazard to the personnel servicing or working on the system. If a hazard is recognized, the supervisor is responsible for implementing the lockout/tagout of the system.

Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

Tagout devices, including their means of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment tolerant nylon cable tie.

A lockout device is one which, when attached to a circuit switch or a mechanical control device with a padlock, will effectively lock out the equipment in the off position. This device shall have the capability of accommodating several locks.

Each CONTRACTOR will appoint a Tagging Supervisor to ensure the implementation of the procedures. The Supervisor will review the involved circuits, equipment and area to make sure all items are neutralized as required. The Supervisor will also ensure that danger tags are completed and signed and that they are attached to the item being locked out. The Supervisor will ensure that all locks and tags used by craft personnel are strictly controlled and an adequate log is maintained of all lockout/tagout issues. Equipment used to accomplish the locking out will consist of padlocks, lock holding devices, danger tags and danger signs.

Only tamper-proof, hardened steel locks will be used. No two locks should be of the same key number or pattern, and the patterns of the keys shall be checked to verify that each is unique and operates in only one lock.

4. EMPLOYEE TRAINING

Training will be provided by each CONTRACTOR to ensure that the purpose and function of the energy control program is understood by all their employees.

The training program will include:

1. Recognition of hazardous energy sources.
2. Type and magnitude of energy sources in the workplace.
3. Methods used for energy control.
4. Limitations of “danger” tags.
5. Shift and personnel changes.

Retraining will be provided whenever there is a change in job assignment or machinery equipment or process that may present a new hazard. Training will be documented for each employee attending with records maintained. Attendees, dates and trainer will be completed in the file.

5. SUPERVISOR

The Supervisor will inspect the involved circuits, equipment and area and review the following to determine what procedures are necessary to safely isolate the affected area:

1. All electrical equipment involved with the process.
2. All moving parts.
3. Pneumatic, hydraulic, or other fluid lines in the operation.
4. Mechanisms that are under spring tension or compression.
5. Suspended mechanisms or parts that normally cycle by gravity.

All lockout equipment not in use is to be returned to the Supervisor and stored in a secure area safe from tampering.

6. PROCEDURE

1. When a Foreman is assigned work requiring shutdown of equipment or isolation of the component, he shall coordinate that shutdown/isolation with their Supervisor. A padlock, lockout device and danger tag will be issued by the Supervisor. The lockout key log will be completed by the Supervisor before issuing the tagout and lock. The craft supervisor will be given the danger tags and lockout device for installation on the system. The Supervisor will keep the key(s) until the work is completed and verified that it is safe to release the tagout.
2. The control power shall be turned off and a lockout device installed through the safety holes in the handle of the electrical control. Mechanical valves shall be secured by means of chains or other mechanical means and locked to ensure they remain in a safe condition.
3. An individual padlock is to be placed on the controlling device by each craft who is working on the circuit or system. A “Danger—Do Not Operate” tag will then be completed by the foreperson and their Supervisor, and attached to the lock or switch. This tag will contain the foreperson’s signature and Supervisor’s signature.
4. Other crews or crafts who are working on the circuit, or are working on equipment powered by the circuit tagged out, shall obtain their own lockout for that circuit before proceeding with their assigned work.

UNDER NO CIRCUMSTANCE SHALL ANY INDIVIDUAL WORK UNDER ANOTHER INDIVIDUAL’S SAFETY LOCK. NO ONE IS TO REMOVE A SAFETY TAG EXCEPT THE AUTHORITY THAT ORIGINALLY PLACED THE TAG.

5. Drain, purge, and/or bleed off any hydraulic, pneumatic or other fluid lines affecting the area under construction to eliminate pressure, contents, or both. Valves controlling these lines will then be locked in the required position.

6. Mechanisms under spring tension or compression shall be blocked, clamped or otherwise secured in position.
7. Before working on a circuit, it must be checked with an approved testing or volt meter to make certain circuits have been properly de-energized.
8. The padlock and tag can be removed only by the person who signed and placed the tag and lockout. In the event that the person is absent from the JOB SITE and cannot be recalled to remove the lock, the craft supervisor, after physically ensuring that all other individuals are clear of the system and that safe conditions have been established, may remove the tags and lockout switch.

7. ENERGIZED ELECTRICAL WORK

Some electrical work must be done on energized circuits. Recognizing this, the Contractor's Superintendent may receive permission to do some hot work on energized electrical circuits. In order to receive this permission, the Superintendent will request, in writing, to H-E-B for approval prior to the work beginning. Such a request must include the following information: (Refer to page 41 for further detail on Energized Electrical Work)

1. Who is requesting the approval.
2. Description of work.
3. Reason work cannot be performed under lockout rules.
4. Description of safety measures to be used.
5. List instructions to be given to workers.
6. List names of all workers involved.
7. Name of Superintendent who will directly supervise the work.
8. Signature of the Safety Coordinator.
9. Signature of Contractors Project Manager

MANUAL MATERIAL HANDLING

Wherever possible, materials should be moved, stacked or lifted by mechanical means.

When manual materials handling methods are to be used, proper lifting methods will be practiced. It will be the primary responsibility of the CONTRACTOR'S Safety Coordinator and the individual supervisor/foreperson to instruct employees in the proper methods for lifting various materials. Special handling instructions may be necessary for certain types of materials.

At least two people should be involved when handling extremely long, awkward or odd-sized materials. If more than two people are required to make the lift, mechanical means should be utilized. Personnel should be encouraged to seek assistance when necessary.

Proper protective equipment will be utilized during manual materials handling activities. Whenever metal or lumber are handled, proper gloves will be worn. In the case of handling sacks of lime or cement, or while moving dusty materials it may be necessary to provide additional eye and/or respiratory protection.

Passageways will be kept clear and in good repair to allow for safe movement of employees and equipment.

Particular attention will be given to proper storage/stacking methods. Materials will be piled or stacked in a stable manner so that they will not fall on employees or equipment. Materials stored in lay down areas will be stored in an organized, logical manner, readily accessible and easily removed when needed.

EMERGENCY PROCEDURES

1. POLICY AND SCOPE

These procedures are designed to provide general guidance for emergencies arising in the course of the project. These procedures do not address all potential emergency situations; rather, they are directed to major emergencies within the general confines of the JOB SITE.

By way of definition, a disaster or catastrophic situation could include (and is not limited to) any of the following: tornado, storm, flood, cave-in, mudslide, snow/ice storm, fire/explosion, structural collapse, hazardous waste spill or other occurrence which severely impacts the project.

2. PROCEDURES

1. Medical Emergency

The Project Safety Coordinator will be contacted immediately in the event of any emergency. In the event The Project Safety Coordinator can not be reached, contact the Senior Superintendent.

The JOB SITE will contact emergency agencies and other outside medical facilities.

2. Tornado Warnings

In the event of a tornado, personnel shall be notified of the potential danger and should be moved to structurally protected areas. Personnel should be kept away from windows and glass during a tornado. Personnel should avoid waste piles or stacks of building materials as points of safe refuge.

3. Chemical Release

The same notification will be used if there should be a substantial chemical release. Where possible, personnel downwind of the release will be alerted to the danger by telephone or message. Once the fire department and The Project Safety Coordinator have been alerted, CONTRACTOR personnel and equipment will be employed to control the spill if possible. Personnel must have the proper personal protective equipment and knowledge of the involved chemical before attempting to control the spill. If fire or explosion hazards are present, control will be left to trained professionals. Where feasible, absorbent materials should be used to contain the spill.

3. RESPONSIBILITIES

General Contractors, Contractors and Subcontractors will be responsible for training supervisory personnel within this program and for providing all possible assistance during the emergency situation. All General Contractors, Contractors and Subcontractors are also responsible for designating an assembly area away from the construction and free of other exposures to use during an emergency. Care should be taken to reassess the assembly site as construction progresses so that a viable site is always available.

General Contractors, Contractors and Subcontractors have the responsibility to inform their employees of this site and of the procedure to be followed. Supervisory personnel will complete a roll call immediately upon assembly to account for all personnel. Personnel not accounted for should be reported to the responding agencies.

All contact with the media will be conducted by the OWNER, H-E-B.

The JOB SITE office will maintain a "weather radio" to monitor the continuous weather band in the Construction Project area. All CONTRACTORS must be notified when an alert is given.

EMERGENCY EVACUATION

1. POLICY AND SCOPE

Emergency evacuation procedures during the event of a fire or other emergency will assist in the safe evacuation of all workers at the site. Workers should be aware of the audible and visible signals that will be used to signify an emergency at their location. Workers should become aware of at least two means of exit from any area. General Contractors, Contractors and Subcontractors must train employees in the applicable evacuation procedures for the JOB SITE.

Upon activation of the emergency evacuation notification, or employees becoming aware of a fire or other emergency within the immediate area, the following steps should be followed:

1. If employee is first to become aware of emergency, employees should notify fellow workers within the immediate area and immediate supervisor.

2. Workers should exit the structure or excavation using stairways or ladders and proceed to pre-designated assembly areas. Foremen and supervisors should take an immediate roll call to account for all employees. If an employee is missing, the emergency crew should be immediately notified upon its arrival.
3. If an evacuation is required due to a hazardous material spill or release, employees will be instructed to move upwind from the release. Employees should assemble as far from spill as possible.
4. The fire department and emergency response team should be immediately notified of any emergency situation. Even small fires or spills can develop into large losses.

CRANES AND RIGGING SAFETY

1. POLICY AND SCOPE

This section pertains to cranes and rigging, and other types of hoisting equipment. CONTRACTORS are responsible for safe operation of all such equipment, and for compliance with all applicable federal, state, and local codes.

2. CONTRACTOR RESPONSIBILITIES

The CONTRACTOR is responsible for properly maintaining equipment according to the manufacturer's recommendations. Such equipment (including leased or rented) shall meet all federal, state, and local regulations with respect to safe operation. A maintenance history must be maintained and provided upon request. All machinery will be inspected on a daily basis (preferably at the beginning of each shift) by the operator and the oiler (as appropriate), and all deficiencies properly documented. Deficiencies will be corrected on the spot prior to equipment operation. An annual inspection of the hoisting machinery must be made by a competent person. This inspection will be properly documented by the CONTRACTOR for future reference. Proper certification of each crane and lifting device will be maintained on-site by the CONTRACTOR.

The swing radius at the rear of the crane should be barricaded in such a manner to prevent employees from being struck or crushed by the crane.

Wire rope safety factors shall meet ANSI B 30.5. The units will also be equipped with an approved U.L. Listed fire extinguisher (minimal rating 5B:C). All crawler and truck cranes on the JOB SITE will meet the requirements for design, inspection, testing, construction, maintenance and operation as outlined in ANSI B 30.5.

3. CRANE OPERATION

Cranes on-site will be operated in accordance with all manufacturer's specifications and limitations pertaining to the piece of equipment. Any attachments utilized with the piece of equipment shall not exceed the capacity, rating or scope recommended by the manufacturer. Rated load capacities, recommended operating speeds and special hazard warnings will be conspicuously posted on all equipment. Such instructions shall be visible to the operator while at the control station.

Only approved standard hand signals for crane, derrick and boom equipment shall be used (see Appendix B, Hand Signals). A copy of these signals will be posted in the operating position of each piece of equipment. Only properly trained persons are to be allowed to give signals to crane operators. Any operator not knowing hand signals shall be removed from the site.

On pile driving and lifting equipment, outriggers must always be utilized on equipment where it is provided prior to actual equipment operation. Special care should be taken on filled areas to utilize sufficient cribbing to compensate for the soft ground. Each outrigger float should have an area of cribbing, in square feet equal to crane capacity in tons, divided by 5. The strength shall be equal to 4" of hardwood for capacities up to 50 tons and 8" of hardwood for capacities over 50 tons.

Crane and other boom equipment operations near power lines are a potential danger. Extreme care must be taken under those circumstances. Where possible, electrical distribution and transmission lines will be de-energized and visibly grounded, and insulating barriers will be erected to prevent physical contact with the lines. Any overhead wire will be considered to be energized unless and until the line owner or electrical utility

authorities indicate it is not energized and the line has been visibly grounded. Equipment or machines near power lines shall be operated in accordance with the following (these requirements are in the most recent ANSI B30.5):

- For lines rated 50 kV, or less, the minimum clearance between the lines and any part of the crane or load shall be 10 feet.
- Over 50 kv to 200 kv 15'
- Over 200 kv to 350 kv 20'
- Over 350 kv to 500 kv 25'
- Over 500 kv to 750 kv 30'
- Over 750 kv to 1000 kv 35'
- When a crane can physically reach the minimum clearance, a person must be designated to observe clearance of the equipment and to give warning when the operator cannot maintain the desired clearance by visual means. This person can have **no** other duties.

1. Hoisting Equipment

All hoisting equipment, regardless of the intended use, shall be designed, installed and operated in accordance with the manufacturer's specifications. All such equipment shall be well maintained throughout its use on the project. Maintenance records will be maintained and available for inspection on request. Rated load capacities, operating speeds and special hazard instructions shall be posted on the cars and platforms. There shall be at least two full wraps of cable on the drums of hoisting equipment at all times.

2. Personnel Hoists

- a) Hoist towers outside the structure shall be enclosed for the full height on the side or sides used for entrance and exit to the structure. At the lowest landing, the enclosure on the sides not used for exit or entrance to the structure shall be enclosed to a height of at least 10 feet. Other sides of the tower adjacent to floors or scaffold platforms shall be enclosed to a height of 10 feet above the level of such floors or scaffolds.
- b) Towers inside of structures shall be enclosed on all four sides throughout the full height.
- c) Foundation and tie back shall be designed by Registered Professional Engineer. Towers shall be anchored to the structure at intervals not exceeding 25 feet. In addition to tie-ins, a series of guys shall be installed. Where tie-ins are not practical, the tower shall be anchored by means of guys made of wire rope at least one-half inch in diameter and securely fastened to anchorages to ensure stability.
- d) Hoistway doors or gates shall not be less than 6'6" high, shall be provided with mechanical locks which cannot be operated from the landing side, and shall be accessible only to persons on the car.
- e) Cars shall be permanently enclosed on all sides and the top, except on sides used for entrance and exit, which have car gates or doors.
- f) A door or gate shall be provided at each entrance to the car which shall protect the full width and height of the car entrance opening.
- g) Overhead protective covering a 2-inch planking, 3/4-inch plywood, or other solid material of equivalent strength shall be provided on the top of every personnel hoist.
- h) Doors or gates shall be provided with electric contacts (interlocks) which do not allow movement of the hoist when the door or gate is open.
- i) Safety devices shall be capable of stopping and holding the car and rated load when traveling at governed tripping speed.
- j) Cars shall be provided with a capacity and data plate secured in a conspicuous place on the car or crosshead.
- k) Internal combustion engines shall not be permitted for direct drive.

- l) Normal and final terminal stopping devices shall be provided.
- m) An emergency stop switch shall be provided in the car and marked "Stop."
- n) Following assembly and erection of hoists, and before being put into service, an inspection and test of all functions and safety devices shall be made under the supervision of a competent person. A similar inspection and test is required following major alteration of an existing installation. All hoists should be inspected and tested at not more than three-month intervals. Records shall be maintained and kept on file for the duration of the job.
- o) All personnel elevators used by employees should be constructed of materials and components which meet the specifications for materials, construction, safety devices, assembly, and structural integrity as stated in the ANSI Standard A10.4, Safety Requirements for Personnel Hoists.
- p) Endless belt-type manlifts are prohibited.
- q) All personnel hoists shall be designed by a professional engineer.

POWER TOOLS

1. POLICY AND SCOPE

It shall be the responsibility of all CONTRACTORS to provide a continuing inspection program of all power tools within their area, and to conform to all applicable codes, standards and statutes pertaining to the operation of all power-operated tools.

All power tools shall be operated within the specifications of the manufacturer's safe operating procedures and any federal, state or local regulations that apply.

2. GUIDELINES

All power tools designed with guards shall be equipped with such guards when in use. All belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains or other reciprocating, rotating or moving parts of power equipment shall be guarded

Employees using power tools which create a hazard from falling, flying, abrasive and splashing objects or exposure to harmful dust, fumes, mist, vapors or gases shall use the personal protective equipment necessary to protect them from the hazard. All such personal protective equipment shall conform to any applicable federal, state or local regulations.

Electric power-operated tools shall either be "double insulated" or grounded in accordance with applicable electrical codes. The use of electric cords for hoisting or lowering tools shall not be permitted on the JOB SITE.

Powder-actuated fastening systems shall meet the ANSI Standard A10.3-1977. All powder-actuated tools are to be used by trained and qualified operators. The tool and fasteners should be stored separately in locked containers.

All powered abrasive wheels and tools shall be supplied with sufficient power to maintain the spindle speed at safe levels under all conditions of normal operation.

Powered abrasive wheels and grinding machines shall be equipped with safety guards in conformance with applicable local, state and federal standards.

Powered masonry saws shall be constructed, guarded and operated in accordance with applicable local, state and federal standards for concrete construction and masonry work.

When the use of a tool creates a respiratory hazard such as dust, the proper respiratory protection shall be used by the employee.

HAND TOOLS

Hand tools can be responsible for accidents when they are improperly used or maintained. To control losses associated with hand tools, all CONTRACTORS will be required to adhere to the following general requirements:

1. Only good quality tools will be allowed.
2. Tools should be maintained in good condition. This shall be verified by daily observation of the various jobs being performed.
3. Tools shall be stored in predetermined safe places, such as racks, shelves or tool boxes when not in use.

4. Approved eye protection shall be required when using tools which present an eye hazard.
5. Sharp tools shall not be carried in hip pockets.
6. Hammers, sledges, drift pins, chisels, wedges or other impact type tools with “mushroomed” heads will not be allowed.
7. Wrenches, including adjustable, pipe, open-end, box end, and sockets shall not be used when jaws are sprung or worn to the point where slippage may occur.
8. Wooden handles of tools shall be kept free of splinters or cracks, and temporary repair of handles through the use of wire, friction or plastic tape will be prohibited.
9. Handles shall be kept tight on the heads of all tools.
10. Hand tools which are covered by specific federal, state or local requirements shall conform to these standards when used on the JOB SITE.

HEAVY EQUIPMENT USAGE & VEHICLE SAFETY

1. POLICY AND SCOPE

This section addresses general precautions associated with off-road heavy equipment with the exception of cranes and related lifting equipment. Due to the wide variety of such equipment, these rules and guidelines will not cover every possible aspect. Rather, they are designed to address overall general concerns associated with this type of equipment. It is the CONTRACTOR'S and the operator's responsibility to ensure that the equipment is maintained and operated in a safe and proper manner.

2. EQUIPMENT MAINTENANCE

All equipment will be well maintained with maintenance records kept. Equipment operators must perform a pre-operation check at the beginning of each shift. Any piece of equipment showing maintenance defects which would render it unsafe for operation will be removed immediately from operation. All equipment (e.g., bulldozers, grader, rollers, etc.) will be fitted with rollover protection systems in compliance with current OSHA requirements. All backup alarms on heavy equipment must be functional. Additionally, all such vehicles will be fitted with approved seatbelts, and operators will be required to wear them whenever operating said equipment.

3. OPERATOR TRAINING

All equipment operators must be certified as competent by their employer. All operators will be expected to operate their pieces of equipment in a safe and efficient manner. All operators will be expected to abide by all project speed limits.

4. SAFETY PROCEDURES

When descending grades, the equipment must always remain in gear, with brakes applied. If the brakes fail to operate, blades, or buckets should be dropped to retard the vehicle's progress.

Whenever a piece of equipment is unattended, the power must be shut off, brakes set, shift lever placed in neutral and blades properly grounded.

HEARING PROTECTION MUST BE PROVIDED FOR ALL EQUIPMENT OPERATORS. USE WILL BE MANDATORY WHERE DB IS OVER 85.

LADDERS

1. SCOPE

This section covers the selection, maintenance and use of all ladders used on the job site. This includes but is not limited to Job Built Ladders, Portable Extension Ladders and Portable Stepladders.

2. PURPOSE

To provide guidelines for the safe selection, setup, maintenance and use of all types of ladders on the job site.

3. GENERAL REQUIREMENTS

The selection of ladders will require the evaluation of the area where it will be used, the experience of the user, and what it will be used for.

1. All ladders used for access from one level to another will require a firm foundation and will be tied or other wise secured in place to prevent movement during use.
2. Where ladders are to be used as a work platform, care to select the correct ladder will be exercised. Selection criteria will include the proper height, weight bearing capacity, and the space in which the ladder is to be used.
3. All ladders will be inspected on a regular basis to insure that they are in good and safe condition.
4. All ladders will be set up in accordance with the following section or the manufacturer's instructions.
5. Employees will face the ladder and use both hands while climbing and descending ladders.
6. All materials and tools will be raised and lowered using ropes or lines and not carried by employees climbing ladders.
7. Employees will keep their body centerline between the rails at all times while using ladders.

4. JOB BUILT LADDERS

1. All job-built ladders will be constructed in accordance with the ANSI standard for Job Built Ladders.
2. The maximum length of job built ladders will not exceed 24'-0.
3. Job built ladders will be set up at a maximum angle of one horizontal to 4 vertical, and secured to prevent movement.
4. Side rails of job built ladders will extend a minimum of 3'-0 above the landing.
5. In locations where 25 or more employees are to use ladders for access, two ladders or a double cleat ladder shall be used.

5. PORTABLE EXTENSION LADDERS

All portable extension ladders will be ANSI type I or IA. When portable extension ladders are to be used near electrical power line they will be made of non-conductive materials.

1. Care shall be taken when using portable extension ladders to keep them out of pedestrian and equipment paths.
2. Portable extension ladders will extend a minimum of 3'-0 above the landing when used for access.

6. PORTABLE STEP LADDERS

All portable stepladders will be ANSI type I or IA.

1. Portable stepladders will be only used in the fully spread and locked position.
2. Employees will keep their feet at or below the third step from the top at all times.
3. Employees will maintain three points of contact with the ladder at all times. While ascending and descending this will be hands and feet. While working from the ladder the employee may use their knees to keep balance.

All employees who work from ladders which are set up close to the edge of the building or a floor opening shall use fall protection systems to prevent falls.

SCAFFOLDING

1. SCOPE AND APPLICATION

This section applies to all scaffolding, supported or suspended, used by any contractor on The Project. All contractors will comply with the standards set forth below. Nothing in this section is intended to conflict with the scaffolding requirements of the OSHA construction standards 29 CFR 1926 Subpart L.

2. GENERAL REQUIREMENTS

1. Scaffolds must be designed by a qualified person and must be constructed and loaded in accordance with that design.
 - a) According to OSHA, a qualified person is “one who by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project”.
2. All scaffolding must be erected, dismantled, moved, or modified under the direction of a competent person.
 - a) The OSHA standard defines competent person as “one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them”.
3. Each scaffold qualified and competent person must be designated by the contractor or subcontractor.
4. A competent person before each work shift must inspect scaffold components for visible defects, and/or after any occurrence which could affect a scaffold’s structural integrity. Inspections should be documented and tags shall be attached to the scaffold system.
5. Any part of a scaffold damaged or weakened such that its strength is less than that specified above, must be immediately replaced, braced to meet the requirements, or removed from service until repaired.
6. Scaffolds must not be moved horizontally while employees are on them.
7. The clearance between scaffolds and power lines must never be less than 10 feet.
 - a) However each situation must be evaluated by the competent person and issues such as additional clearance needed for tools, material, and/ or equipment must be taken into consideration when evaluating safe working distances from power lines.
 - b) The utility company owning or operating the power line may be contacted to de-energize the lines, relocate the lines or to install protective coverings to prevent accidental contact with the lines.
8. Employees are prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such material.
9. Where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads must be used.
10. Working from or on scaffolding during high winds and storms is prohibited unless the competent person has determined that it is safe for the employees to be on the scaffolding.

3. TRAINING

1. Each employee who performs work while on a scaffold must be trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.

2. Each employee involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold must be trained by a competent person to recognize any hazards associated with the work in question.
3. When the supervisor has a reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use, or dismantling of scaffolds, each employee must be retrained so that the requisite proficiency is retained.

4. STRENGTH AND CAPACITY

1. Scaffolds and scaffold components must not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
2. All scaffolds and their components, including suspended scaffolds, must meet the strength requirements of Subpart L of the OSHA 1926 standards.

5. SCAFFOLD WORK PLATFORMS AND WALKWAYS

1. A walkway when used in this scaffold policy means a portion of a scaffold platform used only for access and not as a work platform.
2. Debris may not be allowed to accumulate on platforms
3. Makeshift devices, such as but not limited to boxes and barrels, may not be used on top of scaffold platforms to increase the working level height.
4. Ladders may not be used on scaffold platforms without the permission of the competent person and only after the requirements contained in the OSHA 1926.451(b) (15) have been met.
5. All scaffold work platforms on all working levels must be constructed and maintained as follows:
 - a) The platform must be installed so that the space between adjacent units and the space between the platform and uprights is no more than one inch wide except in cases where the scaffolding qualified person can demonstrate that a wider space is necessary and creates no additional hazard. The opening between the uprights and platform must not exceed 9 ½ inches in any case.
 - b) The full planking/decking requirement does not apply to platforms used solely as walkways or during erection/dismantling operations. The qualified or competent person must determine the requirement for these situations.
 - c) Each scaffold platform or walkway must be at least 18 inches wide. However, there is no minimum width requirement for boatswain's chairs. In areas where the 18 inches cannot be maintained, the designated qualified and competent person(s) must approve the installation and only after guardrails or personal fall arrest systems are installed.
 - d) The edge of the platform must not exceed 14 inches from the face of the work unless guardrails and/or personal fall arrest system has been installed. However, the maximum distance from the face for outrigger scaffolds must be three inches and 18 inches for plastering and latching operations.
 - e) Scaffold planks must extend over their end supports at least six inches unless cleated, restrained by hooks, or equivalent means. Each end of a plank or platform 10 feet or less in length must not extend over their end supports more than 12 inches unless the platform is designed and installed so that the cantilevered portion of the platform;
 - i. Is able to support the intended load (employees, tools, material, etc.), without tipping.
 - ii. Has a guardrail installed which prevents employees access to the cantilevered section of the scaffolding.
 - f) Platforms greater than 10 feet in length, planks must not extend more than 18 inches over end supports unless the platform;
 - i. Is designed and installed so that the cantilevered portion is able to support the intended load without tipping.

- ii. Has guardrails installed to prevent access to the cantilevered portion of the scaffolding.
 - g) On scaffolds where platform planks overlap to create a long platform, the overlap must only occur over supports, and must overlap at least 12 inches unless the planks/platform are nailed together or otherwise secured from movement.
 - h) At all points where scaffold platforms change direction, such as turning a corner,
 - i. Platforms that rests on a bearer at an angle other than a right angle must be laid first.
 - ii. Platforms which rest at right angle over the same bearer must be laid second, on top of the first platform.
 - i) Wood platforms/planks may not be covered with opaque finishes, except for edges, which may be marked for identification. Platforms may be coated with wood preservatives, fire retardant finishers, and slip resistant finishes but these finishes may not obscure the top or bottom wood surfaces.
 - j) Unstable objects may not be used as working platforms.
 - k) Equipment may not be used to support scaffold platforms such as front-end loaders and pickup trucks for overhand bridge scaffolds.
- 6. Fork lifts may not be used to support scaffold platforms unless;
 - a) Approved by the fork lift manufacturer,
 - b) The entire platform is attached to the forks,
 - c) And the forklift is not moved horizontally while the platform is occupied.

6. ACCESS

- 1. When scaffold platforms are +/-2 feet above or below the access point, portable ladders, hook on ladders, stair towers, ramps, walkways, direct access from another scaffold, structure, personal hoist, or similar surface must be used.

Cross braces may not be used as a means of access.
- 2. Steps and rungs of ladder and stairway type access must line up vertically (including distance between rest platforms).

7. HOOK-ON AND ATTACHABLE LADDERS USED ON SCAFFOLDING

- 1. Hook on and attachable ladders must be specifically designed for use with the type of scaffold used.
- 2. Portable, hook on, and attachable ladders must be positioned so as not to tip the scaffolding.
- 3. Hook on and attachable ladders must be positioned so that their bottom rung is not more than 24 inches above the scaffold supporting level.
- 4. When hook on and attachable ladders are used, they must have rest platforms at 35-foot maximum vertical intervals.
- 5. Hook on and attachable ladder rungs must be at least 11 ½ inches long with vertical uniform spacing not to exceed 16 ¾ inches.

8. STAIRWAY TYPE LADDERS

- 1. Must be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level.
- 2. Provided with rest platforms at 12-foot maximum vertical intervals.
- 3. Must have a minimum step width of 16 inches except for mobile scaffolds, which must have a minimum width of 11 ½ inches.

4. Must have slip resistant treads on all slips and landing.

9. STAIR TOWERS

1. Must be positioned so that the bottom step is not more than 24 inches above the scaffold supporting level.
2. A stair rail consisting of a top rail and mid rail must be provided on each side of each scaffold stairway.
 - a) The top rail must also be capable of serving as a handrail, unless a separate handrail is provided.
 - b) Stair rails and handrails must be surfaced to prevent injury (lacerations, cuts, punctures, and snagging of clothing).
 - c) Ends of stair rails must not present a projection hazard.
 - d) Handrails must be at least three inches from other objects.
 - e) Stair rails must be:
 - i. Not less than 28 inches nor more 37 inches from the upper surface of the rail to the surface of the tread,
 - ii. Measured in line with the face of the riser at the forward edge of tread.
3. A landing platform 18 x 18 inches (minimum) must be provided at each level.
4. Each scaffold stairway must be at least 18 inches wide between stair rails.
 - a) Treads and landing must be slip resistant surfaced.
5. Stairways must be installed between 40 to 60 degrees from the horizontal.
6. Guardrails as specified in the Fall Protection section of this policy must be provided on the open sides and ends of each landing.
7. Riser height must be uniform, within ¼ inch, for each flight of stairs.
 - a) Greater variations are allowed for rise heights for the top and bottom steps of the entire system, not each flight of stairs.
8. Tread depth must be uniform within ¼ inch, for each flight of stairs.

10. RAMPS AND WALKWAYS

1. Ramps and walkways more than six feet above lower levels must have a guardrail system which complies with OSHA Fall Protection Standard, 1926, Subpart M.
2. No ramp or walkway must be inclined more than a slope of one vertical to three horizontal (or twenty {20} degrees above the horizontal) unless provided with cleats not more than 14 inches apart which are securely fastened to the platform providing footing.

11. INTEGRAL PREFABRICATED SCAFFOLD ACCESS FRAMES

Must meet the following:

- a) Be specifically designed and constructed for use on ladder rungs.
- b) Not used as work platforms when rungs are less than 11 ½ inches in length, unless the effected workers used fall protection or positioning device, which complies with OSHA 1926.502.
- c) Be uniformly spaced within each frame section.
- d) Have rest platforms at 35 foot maximum vertical intervals
- e) Have a maximum spacing between rungs of 16 ¾ inches. Non-uniform rung spacing caused by joining end frames together is allowed provided the resulting spacing does not exceed 16 ¾ inches.

12. DIRECT ACCESS

Direct access to or from another surface must be used only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.

13. ERECTING/DISMANTLING SCAFFOLDS

1. The scaffold competent person must ensure that safe access is provided for erection and dismantling operation.
2. These activities must be performed only by personnel (experienced and trained workers) selected for such work by the scaffolding competent person.
3. Hook on or attachable ladders must be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.
4. When erecting or dismantling fabricated frame scaffolds, (or system scaffolds), end frames with horizontal members spaced not more than 22 inches apart vertically, may be used as climbing devices for access, provided that they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.
5. Cross braces on fabricated frame scaffolds (tubular welded frame or system scaffolds), may not be used as a means of access or egress.

14. SCAFFOLD COMPONENTS

1. Components manufactured by different manufactures may not be intermixed.
2. Scaffold components made of different metals may not be intermixed.
 3. Any exception to the mixing of components or use of components made of different metals must be obtained from the scaffold competent person and manufacturer prior to use.

15. GUYS, TIES, AND BRACING

1. Guys, ties, and braces must be installed at locations where horizontal members support both inner and outer legs.
2. Guys, ties, and braces must be installed according to manufactures recommendations or at the closest horizontal member to the 4:1 (base to height ratio) height above the base,
 - a) And repeated vertically every 20 feet or less at horizontal member for scaffolds three feet wide or less.
 - b) And repeated vertically every 26 feet or less at horizontal member for scaffolds greater than three feet wide.
3. The top guy, tie or brace must be placed no further than 4:1 (base to height ratio) height from the top.
4. Guys, ties, and braces must be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet measured from one end. (Not from both ends).
5. Ties, guys or braces must be installed to prevent tipping of supported scaffolds in circumstances where an eccentric load, (such as a cantilevered work platform) is applied or is transmitted to the scaffold.

16. SCAFFOLD SUPPORT AND FOOTING

1. Scaffold support poles, legs, posts, frames, and uprights must be placed on base plates, with mudsill or other firm foundation.
2. All footings must be level, sound, rigid and capable of supporting the loaded scaffolding without settling or displacement.
3. Unstable objects such as concrete blocks, barrels, boxes, and loose brick may not be used to support scaffolds or platform units.
4. Scaffold support poles, legs, posts, frames and uprights must be plumb and braced to prevent swaying and displacement.

17. FALL PROTECTION

1. Guardrails must be installed on all scaffold platforms six feet (6'-0) or more above lower levels.
 - a) If this requirement cannot be met, The Project Safety Coordinator must be consulted prior to the use of any scaffolding not protected by a guardrail system.
2. Additionally, any employees using boatswain's chairs, catenary scaffolds, needle beam scaffolds, or ladder jack scaffolds must be protected by a personal fall arrest system.
3. Personal fall arrest system and guardrails are required for the use of;
 - a) Single-point and two-point suspension scaffolds (such as window washers scaffolds).
 - b) Welder's baskets used during erection and welding of steel beams.
4. Each employee using a stair tower must be protected by a guardrail system installed within 9 ½ inches of and along at least one side of the stair.
5. Each employee performing overhand brick laying operations must be protected from falling by the use of a guardrail system and/or personal fall arrest system.

18. STANDARD GUARDRAIL CONSTRUCTION REQUIREMENTS

1. Guardrail systems must be installed on all open sides and ends of platforms.
2. Guardrail systems must be installed before the scaffold is released for use for anyone other than the erection/dismantling crews.
3. The top rail must be approximately 42 inches high (scaffolding manufactured before January 1, 2000 top rail height between 36 and 45 inches, scaffolding manufactured after January, 1996, top rail height between 38 and 45 inches).
4. The top rail must be capable of supporting (without failure) a downward or horizontal pressure of;
 - a) At least 200 lbs. applied at any point along the top edge for frame, system and tube and coupler scaffolds.
 - b) At least 100 lbs. for guardrails installed on single point or two point adjustable suspension scaffolds.
5. Mid rails, screen mesh, intermediate vertical member, solid panels, must be capable of supporting;
 - a) 150-lbs. pressure applied downward or horizontally without failure for frame, systems and tube and coupler scaffolds.
 - b) 75 lbs. for single and two point adjustable scaffolds.
6. Guardrails must not present injury hazards to scaffold users (cuts, punctures, etc.) or snagging of clothing.
7. Ends of rails must not overhand end support posts to create a projection hazard.
8. Steel or plastic banding may not be used for top or mid rails.
9. Manila or plastic rope may not be used for top or mid rails.
10. If and when guardrails will not provide necessary fall protection for the work done using scaffolding, personal fall arrest system must be utilized as approved by scaffolding competent person.
11. Cross bracing cannot be used as a guardrail replacement on The Project.

19. INSPECTION

1. Before starting work on a scaffold, inspect visually to determine that:

- a) Handrails, mid rails, toe boards, and decking is in place.
 - b) All wheels are locked on movable scaffolds.
 - c) Locking pins are in place at each joint.
2. Employees must wear safety harnesses and be properly tied off on any scaffold platform over six feet (6'-0) in height and not equipped with standard handrails, mid rails, or complete deck.
- a) Do not change or remove scaffold members unless authorized.
 - b) No one is allowed to ride on a rolling scaffold when it is being moved. Remove or secure all tools and material on the deck before moving.
 - c) Do not climb on, or work from, any scaffold, handrail, mid rail, or brace member. Use the ladder to get on the scaffold.
 - d) All scaffolds must be erected level and plumb, on a firm base.
 - e) Scaffolds must be tied off or stabilized with outriggers when the height is more than four times the smaller base dimension. Scaffolds must also be tied off horizontally every 30 feet.
 - f) When space permits, all scaffold platforms must be equipped with standard 42-inch high handrails rigidly secured (not wired), standard 21-inch high mid rails, completely decked with safety plank or manufactured scaffold decking, and rigidly secured toeboards, all four sides.
 - g) Adjusting or leveling screws may not be used on scaffolds equipped with wheels. Adjusting screws shall not be extended more than 12 inches of thread.
 - h) Be sure you know the safe working loads on all scaffolds.
 - i) Rolling scaffolds must be used only on level, smooth surfaces, or the wheels must be contained in wooden or channel iron runners. Watch for overhead clearance when moving. Casters must be pinned.
 - j) Do not alter any scaffold member by welding, burning, cutting, drilling, or bending.
 - k) Do not stack brick, tile, block or similar material higher than 24 inches on the scaffold deck.
 - l) Patented Metal Scaffolding
 - i. Generally, parts and sections of scaffolding made by one manufacturer are not to be used with another manufacturer's.
 - m) Suspended Scaffolding
 - i. Swinging stages, boatswain chairs, floats, and needle beams require special approval prior to use.
 - ii. Attach and secure safety belt before stepping on these scaffolds and do not remove until clear of the scaffold. Tie off to independent lifeline or building structure. One lifeline per person.
 - n) Decking

- i. Planks of two-inch scaffold grade lumber or laminated wood. Store on dunnage separately from ordinary lumber.
- ii. Manufactured aluminum decking. Use for scaffolds only.

20. AERIAL LIFTS

1. Employees must be trained on the equipment they will be operating.
2. Lifts must be inspected and determined to be in a safe condition prior to use.
3. Only the minimal materials, tools, and equipment are allowed to be hoisted in personnel lifts.
 - a) Lifts may not be used to raise/position materials.
4. Continuous tie-off is required by utilizing a full body harness with dual shock absorbing lanyards.
 - a) The guardrails around scissor lift platforms are an acceptable tie off point, if approved by the manufacturer.
5. All gates/guardrails must be closed/installed prior to raising the platform.
6. Employees may not dismount from lifts in an elevated position (unless double-lanyard tie off is possible).
7. Appropriate clearances around energized electrical conductors must be maintained.
 - a) Recognized electrical safe work practices must be observed.
8. All parts of an employee's body must remain inside the lift platform when it is being raised.
 - a) Lifts must be lowered prior to traveling long distances (over ten feet).
 - b) If lifts are moved in a raised position, the operator must look in the direction of travel and avoid all overhead obstructions
 - c) Floor load ratings must be adhered to.

21. PROTECTION FROM FALLING OBJECTS

1. In addition to hard hats, contractors must provide protection from fall objects through the use of debris nets, catch platforms, canopies, installation of toe-boards etc.
2. When potential falling objects are too large or heavy to be contained or deflected by the above mentioned protective measures,
 - a) The objects must be kept away from the edge of the surface from which they could fall,
 - b) And secured as necessary to prevent their falling.
3. Scaffolds four feet or higher must have toe boards, screens, mesh installed or must be barricaded beneath to prevent employee access.
4. Whenever tools, material or equipment are piled higher than the toe board,
 - a) Paneling or screening extending from the toe board or platform to the top of the guardrail shall be erected for a distance sufficient to protect workers below:
 - b) A guardrail system with opening small enough to prevent material from falling,
 - c) A canopy, net, or catch platform strong enough to withstand impact forces of the potential falling objects shall be erected over the employees below.
5. Toe boards must meet the following:
 - a) Must be capable of withstanding a 50 pound force applied downward or outward at any point along its length.
 - b) Must be at least 3 ½ inches high (2x4 nominal) from the top edge to the walking/working surface.
 - c) Must be securely fastened at the outer edge of the platform.
 - d) Must have no more than a ¼ inch gap between the bottom edge and the walking/working surface.
 - e) Must be solid or with opening not greater than 1 inch in its greatest dimension.

6. Tables contained in the OSHA 1926 Scaffolding Standard (revised 1996 or later), and the manufactures specifications must be used to determine size, spacing, height, spans, grade, loading, and working levels for the type of scaffolding to be erected.
7. Competent persons must document scaffold inspections. Scaffold inspection tags should be used on each scaffold to document that they have been inspected by a competent scaffold person prior to use.

STAIRS

1. SCOPE

This section covers all stairs and stair railings used during the construction of the project. This includes temporary access to parts of the structure as well as entrances into office and storage trailers.

2. PURPOSE

To establish the minimum requirements for stairways and railings used during the construction of the SBC Center.

3. GENERAL REQUIREMENTS

The following general requirements apply to all stairways used during the process of construction, as indicated:

1. Stairways, that may not be a permanent part of the structure on which construction work is performed, must have landings at least 30 inches deep and 22 inches wide at every 12 feet or less of vertical rise.
2. Stairway stringers must be installed between 30 degrees and 50 degrees, from horizontal.
3. Variations in riser height or stair tread depth must not exceed $\frac{1}{4}$ inch in any stairway system, including any foundation structure used as one or more treads of the stairs.
4. Where doors or gates open directly onto a stairway, a platform must be provided that is at least 20 inches in width beyond the swing of the door.
5. Metal pan landings and metal pan treads must be secured in place before filing.
6. All stairway parts must be free of dangerous projections such as protruding nails.
7. Slippery conditions on stairways must be corrected.
8. Employees may not use spiral stairways that will not be a permanent part of the structure.

The following requirements apply to stairs in temporary service during construction:

- a) Pan stairs will not be used by employees for access from floor to floor until the treads and landing have been filled with solid material. During the construction of the stair, employees may use the open pan and landings for access to the work location on the stair. All temporary treads and landings must be replaced when worn below the top edge of the pan.
- b) Except during construction of the actual stairway, skeleton metal frame structures and steps must not be used (where treads and/or landings are to be installed at a later date) unless the stairs are fitted with secured temporary treads and landings.
- c) Temporary treads may be made of wood or other solid material and installed the full width and depth of the stair.

4. STAIR RAILING

The following general requirements apply to all stair rails and handrails:

1. Stairways having four or more risers, or rising more than 30 inches in height, whichever is less, must have at least one handrail. A stair rail also must be installed along each unprotected side or edge. When the top edge of a stair rails system also serves as a handrail, the height of the top edge must not be more than 37 inches nor less than 36 inches from the upper surface of the stair rails to the surface of the tread.
2. Winding or spiral stairways must be equipped with a handrail to prevent using areas where the tread width is less than six inches.
3. Midrails, screens, mesh intermediate vertical members or equivalent intermediate structural members must be provided between the top rail and stairway steps of the stair rails system.
4. Midrails, when used, must be located midway between the top of the stair rails system and the stairway steps.
5. Screens or mesh, when used, must extend from the top rail to the stair stringer or step, and along the entire opening between top rail supports.
6. Intermediate vertical members, such as balusters, when used, must not be more than 19 inches apart.
7. Other intermediate structural members, when used, must be installed so that there are no openings of more than 19 inches in width.
8. Handrails and the top of the stair rails systems must be capable of withstanding, without failure, at least 200 pounds of weight applied within two inches of the top edge in any downward or outward direction, at any point along the top edge.
9. The height of handrails must be no more than 37 inches nor less than 30 inches from the upper surface of the tread.
10. The height of the top edge of a stair rails system used as a handrail must be no more than 37 inches nor less than 36 inches from the upper surface of the stair rails system to the surface of the tread.
11. Stair rail systems and handrails must be surfaced to prevent injuries such as punctures or lacerations and to keep clothing from snagging.
12. Handrails must provide an adequate handhold for employees to grasp to prevent falls.
13. The ends of stair rails systems and handrails must be constructed to prevent dangerous projections such as rails protruding beyond the end posts of the system.
14. Temporary handrails must have a minimum clearance of three inches between the handrail and walls, stair rails systems, and other objects.
15. Unprotected sides and edges of stairway landings must be provided with standard 42-inch high guardrail systems.

GENERAL LIGHTING AND ELECTRICAL SAFETY

1. POLICY AND SCOPE

All lighting and electrical work of any kind, whether permanent or temporary, will conform to the requirements of the National Electric Code and other applicable federal, state, and local codes. Only qualified electricians familiar with these code requirements will be allowed to perform electrical work.

2. PURPOSE

To protect CONTRACTOR employees from electrical shock that may result from defective tools, cords and equipment.

3. GENERAL REQUIREMENTS

U. L. Listed, explosion-proof electrical components, as outlined in the National Electric Code, will be used where flammable or explosive atmospheres may be encountered.

When working close to energized power circuits, the circuit must be de-energized and grounded or guarded through insulation in order to prevent a potential electric shock.

All 110v outlets for temporary construction power will have ground fault circuit interrupters. Basic electrical Systems will also be fitted with have ground fault circuit interrupter systems.

All temporary installation, whether they are extension cords or transmission/ distribution lines, shall be installed properly and covered or sufficiently supported overhead to avoid damage and interference. High voltage power lines will have at least 25 feet clearance above roadways, work areas, etc.

Each disconnecting means for a piece of equipment and any service meter or branch circuit (at its point of origination) will be legibly marked to indicate its purpose.

Additionally, circuits in excess of 600 volts will be marked with “Danger—High Voltage” signs wherever unauthorized personnel may come in contact with live parts.

Extension cords used with portable electric tools should have three-pronged (grounded) plugs. Defective cords or cords with missing ground prongs will be taken from service.

4. EXTENSION CORDS/CORD SETS

This program applies to all cord sets, receptacles not part of the building or structure, and equipment connected by cord and plug.

This procedure also applies to tools protected by double insulation and projects protected by Ground Fault Interrupters.

5. RESPONSIBILITY

1. The CONTRACTOR'S Project Superintendent or designee is responsible for conducting the daily visual inspection.
2. All employees are responsible for identifying defective tools, cords and equipment and removing them from service until repaired and tested.

6. DAILY VISUAL INSPECTION

1. Prior to each day's use a visual inspection shall be made to determine if any external defects (i.e., deformed or missing pins, insulation damage) or indications of internal damage exists on the following:
 - a) Extension cords
 - b) Power tool cords
2. Equipment found damaged or defective shall be immediately removed from service and shall not be used until repaired.
3. Electrical extension cords and power tool cords will not be repaired by using electrical tape.

7. TESTING

1. Electrical contractor will test all hard wired GFCI's at least once each month and maintain a log showing test results.

2. All defective equipment will be removed from service until repaired or replaced.
3. Portable (cord/plug) connected GFCI will be tested by company using them at least once each month. Defective units will be replaced.

8. JEWELRY AND CLOTHING

Conductive articles of jewelry and clothing (such as watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread or metal headgear) may not be worn while working on or near exposed energized parts.

9. LIGHTING

Artificial lighting will be provided by each CONTRACTOR to allow a safe operating environment on the project. This applies to exterior night work and interior work. Lighting will be provided in passageways and stairways to allow effective movement. Artificial lighting systems will be inspected regularly to ensure they are operative and in good repair. Defective lamps should be replaced on a regular basis (all such lamps should be deeply recessed or fitted with guards). Exposed empty light sockets and broken bulbs will not be tolerated.

ENERGIZED ELECTRICAL SAFETY

1. POLICY AND SCOPE

The electrical safety program is designed to structure safety procedures that will effectively meet the federal, state, and local standards for all contractors who are required to work in the presence of electrical energy. This policy has been established to ensure that electrical work on energized parts is performed only when necessary, and every alternative means to carry out de-energized work has been considered and eliminated, and to establish environmental and personal protective safeguards that will identify and control all hazards encountered in testing, maintenance, service and all other work involving exposure to live electrical parts. This policy applies to all individuals working on H-E-B premises.

2. DEFINITIONS

Authorized Persons: An authorized person shall meet all of the requirements of a qualified person. They shall be trained in all of the following:

- The skills and techniques necessary to distinguish exposed energized parts from other parts of electric equipment.
- The skills and techniques necessary to determine the nominal voltage of exposed energized parts.
- The decision-making process necessary to determine the degree and extent of the hazard and the personal protective equipment and job planning necessary to perform the work safely.
- In addition, an authorized person may hold a valid journeyman electricians license, or the equivalent in experience and training as determined by management.

Qualified Person: A qualified person shall be knowledgeable of the construction and operation of equipment, and trained to recognize and avoid the electrical hazards. In addition, a qualified person may hold a valid journeyman electricians license, or the equivalent in experience and training as determined by management. A qualified person must be familiar with and trained in:

- The proper use of special precautionary techniques,

- Personal protective equipment,
- Insulating and shielding materials,
- Along with insulated tools and test equipment.

A person can be considered qualified in respect to certain equipment and methods and still be unqualified for others.

Energized Electrical Work: Any work on electrical equipment, circuits, devices, systems, or any other energized part(s) where an employee is required to deliberately, or could accidentally, place any part of his body, tool or material into or around such electrical devices where the voltage has been deemed to be in excess of 50 volts.

Flash Suit: Protective clothing that provides for easy and rapid removal. The entire flash suit including the window shall have energy absorbing characteristics that are suitable for the arc-flash exposure and shall be supplied by the company performing the work.

De-energized: Current carrying parts that are free from any connection to a source of voltage or from electric charge; not having a potential different than that of the earth.

Electrical Hazard: This is recognized to include three separate hazard categories.

- Electric Shock (a) by simultaneous contact with both the energized ungrounded and grounded conductors. (b) by contact with one of the energized conductors and the ground, and (c) by contact with a metallic part that has become energized by an energized conductor while also in contact with the ground.
- Electric Arc: Arcing faults or "flash" burns are generated as a result of inadequate electrical contact or poor insulation, from phase to ground or phase to phase, as short-circuit current surges through vaporized metal and carbon. Arc temperatures can reach 35,000 degrees F. and the length and duration of the arc will vary. Burns are severe and often fatal.
- Arc Blast: Tremendous air pressure is developed as a result of the instantaneous occurrence of an electric arc, in the form of a shock wave that may cause property damage, injury or death.

Energized: Electrically connected to a source of voltage or otherwise electrically charged with a potential noticeably different than that of the earth.

FR Clothing: Protective clothing that meets all the requirements of ASTM F 1506 and has been labeled specifically with:

- The tracking identification code system
- Identified ad meeting the requirements of ASTM F 1506
- Manufacturers Name
- Size and other associated standard labeling
- Care instructions
- Fiber content
- The clothing must be designed for easy and rapid removal and the closure design should be appropriate for easy removal of the garment.

Protective Clothing: Clothing including shirts, pants, coveralls and jackets, routinely worn by workers who, under normal working conditions, are exposed to momentary electric arc and related thermal hazards. Protective clothing must be made of all 100% natural fibers and be untreated.

Testing Equipment: For the purpose of this policy, only testing equipment that bears the identifying mark of a recognized testing laboratory, such as UL or CSA, will be used in field operations.

Trouble Shooting: The testing of live electrical circuits known as troubleshooting shall be confined to the purpose of diagnostic readings of voltage and amperage only. All methods of safety will be employed during this procedure, and the live parts shut down and locked out for subsequent repair or additional work.

Requirements: Energized electrical work includes working on or near any energized electrical system, whether alternating or direct current, including, but not limited to, service entrance sections, distribution switchgear, transformers, distribution panels, UPS Systems and branch circuit wiring and may include, but not be limited to:

- Voltage Testing,
- Circuit Testing,
- Trouble-shooting,
- Power switching,
- De-energizing and Re-energizing Procedures,
- Pushing fish tapes or pushing/pulling wire into an energized enclosure,
- Work performed on energized enclosures,
- Excavations near underground electrical lines.

All circuits, equipment, devices and other apparatus must be placed into an electrically safe work condition before any work can be performed. If the equipment cannot be placed into an electrically safe condition a Hazard/Risk Analysis must be performed and approved by management. This must be done using the hot work request form that is part of this document. No management approval shall be granted unless all requirements of the Energized Electrical Work Safety Program have been satisfied.

An electrically safe (de-energized) work condition shall be achieved when performed in accordance with company policy and the following conditions have been met:

- Determine all possible sources of electrical supply to the specific equipment. Check applicable up-to-date drawings, diagrams, and identification tags.
- After properly interrupting the load current, open the disconnecting device(s) for each source.
- Where it is possible, visually verify that all blades of the disconnecting devices are fully open or that draw-out type circuit breakers are withdrawn to the fully disconnected position.
- Apply lock/out tag/out devices in accordance with company lock/out tag/out policy.
- Use an adequately rated voltage detector to test each phase conductor or circuit part to verify they are de-energized. Proximity detectors shall be permitted for preliminary testing but shall not be considered an adequately rated voltage detector. An additional test with an adequately rated voltage detector will be required when a proximity tester has been utilized.

Note: The suggested test instrument is a vibrometer (Wiggy). The vibrometer does not rely on internal voltage sourced to operate functionally and therefore is the most reliable instrument for determining a circuit is de-energized.

Where the possibility of induced voltages or stored electrical energy exists, ground the phase conductors or circuit parts before touching them. Where it could be reasonably anticipated that the conductors or circuit parts being de-energized could contact other

exposed energized conductors or circuit parts, apply ground-connecting devices rated for the available fault.

- Only authorized persons are permitted to work on electrical conductors or circuit parts that have been de-energized and locked out.
- Only authorized persons are permitted to work on electrical conductors or circuits that cannot be de-energized.
- All equipment shall be installed and used in accordance with the manufacturer's instructions.
- Steps shall be taken to maintain electrical equipment's insulation and enclosure integrity.
- All work on equipment that is energized at 50 volts or more shall be planned and documented according to the procedures of this program.
- Every attempt shall be made to protect employees from shock, burn, arc-blast and other hazards that are present in this working environment. Employees shall be responsible for protecting themselves from such hazards with the assistance and supervision of management, and personal adherence to the policies and procedures set forth in this manual. This includes lock-out / tag-out procedures and the appropriate personal protective equipment.
- Employees shall use only the appropriate equipment to accomplish an assigned task.
- The true effectiveness of any safety program relies upon the execution and acceptance of the policy by the employees affected. This program shall be audited annually and revised as needed. The management shall encourage input from all employees concerning safety procedures and policies.
- Training is essential to employee safety. Each company shall strive to provide up-to-date training to employees on an annual basis. Employees shall keep current on personal protective techniques, safety policies and techniques and potential hazards.

3. ENGINEERING HAZARD CONTROLS

Control of electrical hazards shall be established and observed by all employees to minimize hazards from electrical energy:

- Approved clearances will be established for all distribution panels and equipment.
- Electrical rooms, vaults and areas containing equipment will be guarded against accidental damage by suitable barriers and structural means.
- Electrical installations will conform to the requirements of the NEC, including support requirements for all conduit and equipment.
- Adequate lighting shall be maintained in all areas where energized work is to be carried out.
- All enclosures, including junction boxes, switches, panels, etc, as required by the NEC shall be properly maintained in order to safely contain energized parts. Shock injuries may be caused by poorly grounded or ungrounded electrical equipment. Close attention must be paid to the condition of all equipment and the integrity of the grounding system.

4. ADMINISTRATIVE HAZARD CONTROLS

- Every electrical conductor or circuit part shall be considered energized until proven otherwise.
- De-energized conductors and equipment that have not been locked out or tagged shall be treated as energized parts.

- No barehanded contact is to be made with exposed energized electrical conductors or circuit parts above 50 volts to ground.
- All employees will follow established electrical safety requirements set forth in this Policy.
- Work on energized electrical parts is limited to Authorized Persons, under the requirements set forth in this Policy.
- Each company will train their employees in the procedures set forth in this policy to qualify them for working as Authorized Persons, and will establish records and procedures to ensure that only Authorized Persons engage in work on live electrical parts.
- Access to electrical rooms or other areas engaged in energized work, is limited to those employees who have a legitimate need to enter.
- Housekeeping duties will not be performed at close distances to live parts unless adequate barriers and insulating equipment are employed.
- Portable ladders shall have non-conductive side rails if the ladder or employee might be in a position to contact live electrical parts.
- Physical barriers and warning signs will be used to prevent unauthorized entry to areas where energized work is being carried out.
- Violation of the safety policies and work procedures set forth in this addendum will be considered willful misconduct and subject to disciplinary procedures, up to and including termination.

5. PROTECTIVE EQUIPMENT

- Authorized persons should wear electrically rated footwear or use an approved electrical rated mat when appropriate when engaged in the performance of energized work.
- Only tools that are designed and rated for the appropriate voltages will be used on energized circuits, equipment or systems.
- Metal belt buckles, jewelry, key chains, cell phones, pagers, etc., should be removed when working or anything energized. Hands should be clean and free of lotion or sunscreen to prevent damaging the voltage rated glove liners. Disposable cloth gloves may be worn inside the liners to limit the effects of perspiration.
- Safety glasses and hard hats will be worn at all times. Additional personal protective equipment must be used as outlined in the Hot Electrical Work Personal Protective Equipment Matrix.
- Voltage rated gloves will be stored in the proper canvas bag, with the (rubber) liners separated from the outer leather (glove) protectors. The person doing the work will inspect all voltage rated PPE before use.
- Blankets will be stored in protective tubes and bear an inspection date of not more than one year from the date of intended use.
- Voltage rated tools should be clean and have a smooth finish with no breaks in the insulation. These tools should be stored separately or in protective devices to avoid damage from other tools or materials.

6. PROCEDURES

The following procedures shall apply to all work on, or close to exposed and energized electrical conductors or circuit parts. Additional procedures may be needed for specific tasks.

- **Employees shall exhaust every reasonable effort to perform work de-energized.**

- If the decision is made to work on the circuit, equipment or system energized then refer to the energized electrical safety matrix. The definition of energized work is:

Any work on electrical equipment, circuits, devices, systems, or any other energized part(s) where an employee is required to deliberately, or could accidentally, place any part of his body or any type of tool into or around such electrical devices where the voltage has been determined to be in excess of 50 volts.

- To work on energized devices as identified in this program you must be:
 - A Journeyman Electrician or the equivalent in experience and training as determined by management.
 - Trained on the Energized Electrical Work Safety Program.
 - Be considered an authorized person as defined in this program.
- If the owner requires that work must be performed on energized circuits, they must sign the appropriate permit and included in this program. If the decision to work on energized circuits is made by the contractor, then the owner does not need to sign these forms.
- The qualifications and the number of employees that will be involved in the work will be established and authorized persons will be selected for the work.
- The work hazards and the extent of the risk shall be thoroughly examined.
- The appropriate Hot Electrical Work form will be selected, completed, and approved. This form will be reviewed by each employee performing the work and will be maintained in the immediate work area.
- Ensure the appropriate personal protective equipment has been obtained as outlined in the Matrix.
- Manufacturer's instructions and equipment details shall be consulted prior to any work being performed.
- All available electrical plans/drawings shall be consulted prior to any work being performed.
- Appropriate barricades, signs and warning tape must be employed in order to restrict the area to unauthorized personnel as well as create safe working space for authorized persons.
- If the second person cannot maintain a safe distance (4 - feet) from the exposed part(s), he or she must be wearing the same PPE as the authorized person performing the work.
- Once the work is complete, you should return the energized equipment PPE kit to the office.

6. HAZARD ANALYSIS PROCEDURE

The employees involved in work on or near electrically energized conductors or circuit parts shall be responsible for completing a Hot Electrical Work Permit before any work may be performed.

The Hot Electrical Work Form shall be submitted to supervising management for approval before any work may be performed.

- The Hot Electrical Work Permit must be completely filled out and submitted to supervising management prior to any work being done.
- All involved shall be briefed on the potential hazards to persons and property.
- The supervising management will be responsible for managing and maintaining records including Hot Electrical Work Permits.

- The Hot Electrical Work can be performed if absolutely necessary but appropriate safety precautions will be required.
- If the supervising management determines that it is not possible to perform the Hot Electrical Work in a safe manner even with the precautions set out in this program, then the work is not to be performed unless changes can be made to protect employees
- A single Hot Electrical Work Permit shall be permitted to be filed for work that is repetitive in nature such as trouble shooting on a construction project with supervising management's approval. A Hot Electrical Work Permit must be filed with management for each individual job site and the unique hazards of each jobsite must be evaluated. This Permit will be valid for a period not to exceed 30 days. After 30 days the energized work procedures must be re-evaluated and a new permit completed and signed.

The Hot Electrical Work Permit must be filled out. Employees shall follow the directions presented below for each section.

- Date work will be performed: The actual date of install or work shall be placed here. If the date is not yet determined, use a tentative date.
- Timework will be performed: Use the estimated time the work will be performed. List both approximate start and stop times.
- Project: Enter the Job Name
- Supervisor Requesting Hot Work: Enter the name of the supervisor who will be directly responsible for supervising the work.
- Employees involved in the work: Enter the names of all employees that will be directly involved in the work. Be sure to list all persons that will or could enter the 4 feet Flash Hazard Boundary.
- Explain the work to be performed: A detailed explanation of the work to be performed, including exact procedures to be followed, shall be listed.
- Required PPE: List all PPE according to the Hot Electrical Work Matrix.
- Approval: The Hot Electrical Work Permit must be presented to each of the individuals listed and a signature obtained to indicate they have reviewed and approved the hot electrical work.
- Involved Employees: All employees will be listed on the Hot Electrical Work Permit and shall review all the documentation and receive task specific training necessary for the work to be performed. Each employee shall sign the Permit after completion of this training.

***NOTE: Although the space provided limits the Hot Electrical Work Permit format to a single page document, the document should be viewed as a guideline to assist in the survey and analysis of flash and electrical hazards prior to work on energized parts. The explanations required by these sections should be detailed and may require additional sheets attached to the Hot Electrical Work Permit.**

STEEL ERECTION

1. SCOPE

This section applies to all employees involved in the erection of structural or miscellaneous steel and iron during the construction of The Project.

2. **PURPOSE**

To set forth the minimum safety requirements for steel erection on the job site.

3. **FLOORING REQUIREMENTS**

1. Permanent Flooring - Skeleton Steel Construction in Tiered Buildings

- a) The permanent floors must be installed as the erection of structural members progresses, and there shall be not more than eight stories between the erection floor and the uppermost permanent floor, except where the structural integrity is maintained as a result of the design.
- b) At no time may there be more than four floors or 48 feet of unfinished bolting or welding above the foundation or uppermost permanently secured floor.

2. Temporary Flooring - Skeleton Steel Construction in Tiered Buildings

- a) The derrick or erection floor shall be solidly planked over its entire surface except for access openings. Planking must be of proper thickness to carry the working load but may be less than two inches thick, full size undressed, and must be laid tight and secured to prevent movement.
- b) On buildings or structures not adaptable to temporary floors, and where scaffolds are not used, safety nets shall be installed and maintained whenever the potential fall distance exceeds two stories or 25 feet. The nets must be hung with sufficient clearance to prevent contacts with the structures below. Net installation must conform to the OSHA (CFR 1926) standards. Safety harnesses with cable safety lines may be used to provide fall protection in lieu of safety nets but the safety harness and static life line systems must conform to OSHA (CFR 1926) standards. Note: **Fall protection** is required for all personnel exposed to a fall or 6 feet or more.
- c) A safety railing of ½" wire rope or equivalent must be installed approximately 42 inches above the working walking surface around the periphery of all temporary-planked or temporary metal-decked floors of tier buildings and other multi-floored structures during structural steel assembly.
- d) Where erection is being done by means of a crane operating on the ground, a tight and substantial floor shall be maintained within two stories or 30 feet, whichever is less, below and directly under that portion of each tier of beams on which bolting, riveting, welding, or painting is being done.

3. Flooring - Other Construction

- a) In the erection of a building having double wood floor construction, the rough flooring shall be completed as the building progresses, including the tier below the one on which floor joists are being installed.
- b) For single wood floor or other flooring systems, the floor immediately below the story where the floor joists are being installed shall be kept planked over.

4. **STRUCTURAL STEEL ASSEMBLY**

1. During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts, or the equivalent at each connection and drawn up wrench tight.
2. Open web steel joists shall not be placed on any structural steel framework, unless such framework is safely bolted or welded.
3. In steel framing, where bar joists are utilized, and columns are not framed in at least two directions with structural steel members, a bar joist shall be field-bolted at columns to provide lateral stability during construction.
 - a) Where long span joists or trusses 40 feet or longer are used, a center row of bolted bridging shall be installed to provide lateral stability during construction prior to slacking of hoisting line.

- b) No load shall be placed on open web steel joists until these stability requirements are met.
 - 4. Tag lines shall be used at all times for controlling loads.
 - 5. False decking or safety nets, and fall arrest systems must be provided for steel assembly exceeding 25 feet in height from the ground or solid floor/deck. Note: **Fall protection** is required for all personnel exposed to a fall or 6 feet or more.
5. ***BOLTING, RIVETING, FITTING-UP, AND PLUMBING-UP***
- 1. General Requirements
 - a) Containers shall be provided for storing or carrying rivets, bolts and drift pins, and secured against accidental displacement when aloft.
 - b) Pneumatic hand tools shall be disconnected from the power source, and pressure in hose lines shall be released, before any adjustments or repairs are made.
 - c) Air line hose sections shall be tied together except when quick disconnect couplers are used to join sections.
 - d) Eye protection must be worn.
 - e) Fall protection must be provided and enforced for personnel exposed to a fall of 6 feet or more.
 - 2. Bolting
 - a) When bolts or drift pins are being knocked out, means shall be provided to keep them from falling.
 - b) Impact wrenches shall be provided with a locking device for retaining the socket.
 - 3. Riveting
 - a) Riveting shall not be done in the vicinity of combustible material, unless precautions are taken to prevent fire.
 - b) When rivet heads are knocked off, or backed out, means shall be provided to keep them from falling.
 - c) A safety wire shall be properly installed on the snap and on the handle of the pneumatic riveting hammer and shall be used at all times. The wire size shall be not less than No. 9 (B&S gauge), leaving the handle and No. 14 (B&S gauge) for the snap or equivalent.
 - 4. Plumbing-up
 - a) Connections of the equipment used in plumbing-up shall be properly secured.
 - b) The turnbuckles shall be secured to prevent unwinding while under stress.
 - c) Plumbing-up guys and related equipment shall be placed so that employees can get at the connection points.
 - d) Plumbing-up guys shall be removed only under the supervision of a competent person.
 - 5. Wood planking shall be of proper thickness to carry the working load, but shall not be less than two inches thick, full size undressed, exterior grade plywood, at least ¾ inch thick or equivalent materials. ¾ inch and larger plywood may not span more than 18 inches without being braced or kicked to give added support.
 - 6. Metal decking of sufficient strength shall be laid tight and secured to prevent movement.
 - 7. Planks must overlap the bearing on each end by a minimum of 12 inches.
 - 8. ¾ inch or larger exterior plywood or equivalent must be used around columns where planks do not fit tightly.
 - 9. Provisions must be made to secure temporary flooring against displacement.
 - 10. All unused openings in floors, temporary or permanent, must be completely planked over or guarded.

6. ***FALL PROTECTION***

1. Contractor must develop a written fall protection plan prior to start of work.
2. Where possible handrail or guardrails must be installed.
3. Continuous tie off for all situations where potential fall distance is 6 feet or more and other methods of fall protection are not available.
4. Personal fall arrest systems must include the following:
 - a) Full Body Harness
 - b) Dual Shock Absorbing Lanyards with deceleration devise or retractable life
 - c) Anchor Points

CONCRETE WORK

1. POLICY AND SCOPE

All concrete construction and masonry work (including the placement of reinforcing steel and forms) shall meet the Safety Requirements of OSHA 29 CFR 1926.700 to 1926.706 Concrete and Masonry Construction.

2. PERSONAL PROTECTIVE EQUIPMENT

Employees working with concrete will be required to wear shirts with minimum 4" sleeves, gloves and rubber boots for protection against the hazard of cement burns. Protective creams or lotions to reduce skin irritation and dermatitis may be provided to the workers.

Concrete finishers shall be required to wear knee pads, and to use long-handled floats or powered equipment whenever possible. If powered finishing equipment is used, vibration damping devices should be a part of that equipment.

Nozzle men applying cement, sand, air or water through pneumatic or pressurized hose systems should wear protective face shields and head protection.

Safety glasses and face shields shall be used by employees when chipping, wire brushing or using powered hand tools (including impact and rotary tools).

Hearing protection shall be required in areas with sound levels identified to have a potential for hearing impairment.

3. GENERAL EQUIPMENT

Concrete pumping stations shall comply with the manufacturer's specifications and limitations applicable to the operation of concrete or similar systems. The limitations assigned to the equipment shall be based on the determination of a qualified engineer, competent in this field when manufacturer's specifications are not available. These determinations shall be documented and recorded.

Discharge pipes of concrete pumping systems shall be provided with pipe supports designed for 100% overload. Concrete pumping hoses shall be provided with positive fail-safe joint connectors to prevent separation of sections when pressurized.

Powered, rotating-type concrete trowel machines, manually guided, shall be equipped with an automatic shutoff (whenever operator removes his hands from the equipment handles).

The handles of concrete buggies shall not extend beyond the wheels on either side of the buggy.

Where the handles of bull floats have the potential to contact energized electrical conductors, the handles shall be constructed of nonconductive material or insulated with a nonconductive sheath to provide the equivalent protection of a handle constructed of a nonconductive material.

4. FORMS AND SHORING

Form work and shoring shall be designed, erected, supported, braced and maintained so that they will safely support all vertical and lateral loads that may be imposed during placement of concrete. Engineering drawings or plans of all form work and shoring showing the layout, working decks and scaffolding shall be available at the JOB SITE. When temporary storage of reinforcing rods, material or equipment is required on the top of any form work, these areas shall be designed to meet the additional loads of such material.

No partially completed structure shall be exposed to any construction load unless such loading has been considered in the design and approved by the project engineer/architect.

Forms and shoring that have been stripped shall be stockpiled in such a manner to eliminate hazards of protruding wall nails, wire ties and other form accessories having the potential for injury.

Manufacturer's recommendations shall be followed for tubular steel frame shoring. These shall be in conformance with the Scaffolding and Shoring Institute's recommended procedures for compression testing scaffold and shores. Couplers (clamps) shall not be used if found to be deformed, broken or defective in any manner. They shall be constructed of structural type steel, malleable iron or structural grade aluminum. A thorough inspection shall be made of all steel frame shoring prior to erection to ensure the material is not deteriorated by rust or damaged or defective by dents or other damage.

5. PRE-STRESSED AND POST-STRESSED CONCRETE OPERATIONS

When anchor fittings are utilized for tension strands, the recommendations and instruction of the supplier concerning installation, maintenance and replacement shall be followed.

Tools and strand vises shall be kept clean and in good repair.

During jacking operations of any tensioning element or group of tensioning elements, the anchors shall be kept turned up close to the anchor plate.

No one shall be permitted to stand in line or directly over the jacking equipment during tensioning operations. No one shall be allowed to stand behind the jack during tensioning operations.

All stressed concrete members shall be handled or lifted at the point specifically designated on the manufacturer's drawing, with the recommended lifting devices by the manufacturer or the engineer in charge.

All stress members shall be stored on level base and adequately supported during storage and transportation to prevent tipping.

6. MASONRY WORK

The handling and storage of all masonry equipment or material shall be carried out in such a manner as to prevent sliding, falling or collapse of the tiers of stacked, racked or interlocked material.

In stacking bagged materials, such as cement and lime, stacks of over ten bags high shall be provided with restraining walls of sufficient strength to prevent tipping. All cement, lime and other materials stored in bags and used in masonry work shall be stacked so that the mouths or tops of the outside bags are facing towards The Center Operating of the stack.

To prevent a premature slacking action that may cause fires, lime must be stored in a dry place.

7. BRICKS AND MASONRY BLOCKS

Stacks of bricks and masonry blocks shall be kept level and the taper maintained during unstacking operations. Bricks and blocks shall never be stacked on uneven or soft surfaces. Stacks of bricks shall not exceed seven feet. Starting at a four-foot elevation, bricks shall be tapered back up to the seven-foot maximum height.

Brick, block or stone power saws should be equipped with a dust collection system. If a dust collection system is not used, all employees performing this task shall be provided with an approved respirator for protection from the dust hazard. Approved safety goggles and face shields shall be used when cutting brick, block or stone.

8. LADDERS AND SCAFFOLDING

All ladders and scaffolding used in concrete or masonry work shall conform to the section on ladders and scaffolding.

FALL PROTECTION

1. SCOPE AND APPLICATION

The provisions contained in this policy are general in nature and are intended to set the basic guidelines for work at elevations of six feet or more above lower levels. Each contractor and subcontractor must develop site specific fall prevention plans to cover their scope of work. The specific requirements of these plans must not conflict with the provisions contained in this policy. Additionally contractors' and subcontractors' site specific policies and procedures must comply with OSHA's 1926 Subpart M, Fall Protection.

Contractors and subcontractors developing site specific fall prevention plans may need to refer to other sections of this manual as the scope of work may require. Some other sections of this manual, which may be consulted, include; scaffolding, stairways & ladders; steel erection; scissor-lifts and aerial work platforms.

2. RESPONSIBILITIES

1. Senior supervisor
 - a) Must conduct an assessment of the work site to evaluate potential fall hazards to determine proper applications of the requirements outlined in this policy.
 - b) Ensure that the policies and procedures implemented meet the requirements stated here in.
 - c) Ensure that all employees receive the required training in fall prevention.
2. Safety Coordinators
 - a) Must assist in the evaluation and implementation of this policy and act as advisor to the senior supervisor.
 - b) Must assist in providing the required training.
3. Employees
 - a) All employees are required to comply with the fall protection requirements outlined in this policy and any site-specific practices.

3. GENERAL PRACTICES

1. All elevated walking/working surfaces must be evaluated to ensure strength and structural integrity to support employees, materials and tools safely.
2. Unprotected sides or edges that are six feet or more above the lower level must be protected by fall prevention methods such as guardrails and floor hole covers or employees protected by a fall arrest system such as safety nets or personal fall arrest systems. Personal fall arrest systems must incorporate the use of a full body harness.
3. Any employee who is constructing a leading edge six feet or more above the lower level must be protected by the use of guardrails, safety nets (meeting the OSHA standards for fall protection nets), and/or personal fall arrest system.
4. Any employee in a hoist area must be protected from falling six feet or more by a guardrail or personal fall arrest system.
5. If during the course of work, a guardrail system (or portion thereof) has to be removed to facilitate hoisting, landing material, etc. and an employee is subject to falling six or more feet, those employees must be protected by a personal fall arrest system.

4. SPECIFIC HAZARD TYPES

1. Holes (gaps measuring 2 inches or more in its least dimension in a walking/working surface):
 - a) Employees must be protected from falling through holes in walking/working surfaces (including skylights) by covers (labeled Hole Cover or color-coded), personal fall arrest system, guardrails erected around the entire hole or nets erected according to the OSHA standards.
 - b) Employees must be protected from objects falling through holes (including skylights) by covers, toe boards, mesh, barricades erected under the opening preventing entry or similar protective measure.

- c) Barricade tape may only be considered a warning and used only when there is enough room to allow for safe use as a warning (at least six feet back from the opening or edge).
- 2. Form work and reinforcing steel:
 - a) All employees on the edge of form work or reinforcing steel must be protected from falls 6 feet or more to the lower level by;
 - i. Personal fall arrest system, safety nets, or guardrails.
 - ii. Positioning devices may be used while the employee is in a work position and not moving, however, once the worker starts to move a lanyard must be used to provide protection while in motion.
- 3. Ramps and Runways:

When the potential exists for falls more than six feet, guardrails must be used on open sides.
- 4. Excavations:
 - a) When an excavation depth is six feet or more, and employees are exposed to a fall hazard such as working near the edge of the excavation, fall prevention must be provided by the use of guardrails, fence or barricade.
 - b) Barricade tape and other warning devices, if used, must be placed back from the excavation edge at least six feet and entry restricted. If the six-foot distance cannot be maintained, a guardrail, fence or barricade must be used to provide protection.
 - c) Employees at the edge of pier holes, wells, pits, shafts and similar openings which are six feet or more in depth must be protected by guardrails, fences, covers, barricades or personal fall arrest systems attached to an anchor point capable of sustaining 5,000 lbs. loading.
- 5. Dangerous Equipment:

Employees exposed to falling into dangerous equipment such as gears, pulleys, sprockets, electrical equipment, and chemical vats must be protected by guardrails; equipment guards such as vat covers, gear and sprocket covers, etc.
- 6. Overhand Bricklaying and Related Work:

Overhand bricklaying relates to the process of laying bricks and masonry units such that the surface of a wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over while performing such work six feet or more above lower levels. Protection must be provided by guardrails, nets, or personal fall arrest systems.
- 7. Roofing Work:
 - a) Low Slope (slope less than or equal to 4 in 12 vertical to horizontal):
 - i. Fall protection must be provided by guardrails, safety nets, personal fall arrest systems or a combination of warning line system (a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge), and guardrails, warning line system and safety nets, warning line system and personal fall arrest system, or warning line system and safety monitoring system (a competent person is responsible for recognizing and warning employees of fall hazards).
 - ii. On low-slope roofs 50 feet or less in width, the use of a safety monitoring system alone is permitted.
 - iii. The safety monitoring system requires:
 - (a) Competent person to monitor at all times
 - (b) Monitor must be readily identified by sight, i.e. wearing vest or special color hard hat
 - (c) Monitor is on the same level in visual sight of employees.
 - (d) Monitor is close enough to orally communicate.
 - (e) No mechanical equipment used or stored in area.

- (f) Only roofing employees involved.
- (g) Employees must comply with warnings issued by the competent person/monitor, and
- (h) The monitor may not have any other duties.
- b) Steep-Roofs (having a slope greater than 4 in 12 vertical to horizontal):
Fall protection must be provided by the use of guardrails, safety nets, or personal fall arrest system.
- 8. Precast Concrete Erection:
 - a) Includes but is not limited to the erection of wall panels, columns, beams, and floor & roof “tees”, and related operations such as grouting, setting concrete bridge beams, etc.
 - b) Employees engaged in such activities six feet or more above lower levels must be protected by guardrails, safety nets, or personal fall arrest systems.
- 9. Steel Erection:
 - 1. Includes but is not limited to the erection of structural steel for buildings (i.e. columns, beams, joist, trusses, braces, metal decking, grating etc.) and miscellaneous and ornamental metals (stairs, handrails, brick ledgers, door and window headers and braces etc.).
 - 2. All employees engaged in the erection of structural and miscellaneous steel exposed to a fall of six feet or greater must be protected by the use of a personal fall arrest system, or guardrail system.
 - 3. All employees using a personal fall arrest system must comply with the continuous tie-off policy.

5. GENERAL FALL PROTECTION

- 1. Wall openings (including chute openings):
Where the outside bottom edge of the wall opening is six feet or more above the lower level and the bottom of the wall opening is less than 39 inches above the walking/working surface, protection must be provided by guardrails, safety nets, or personal fall arrest systems.
- 2. Walking/Working Surfaces Not Otherwise Addressed:
 - a) Personnel on walking/working surfaces six feet or more above lower levels must be protected by guardrails, safety nets, or personal fall arrest systems.
 - b) This procedure does not necessarily relate to working from or on:
 - i. Scaffolds
 - ii. Cranes & derricks
 - iii. Steel erection
 - iv. Construction of electrical transmission lines, and
 - v. Stairways and ladders
 - vi. Check other procedures/policies listed in this manual for additional requirements pertaining to those conditions listed above and the appropriate OSHA standards.
- 3. Protection From Falling Objects:
 - a) In addition to utilizing hard hats at all times on the site according to company policy and OSHA standards, the following shall apply:
 - i. Erect toe boards, screens and/or guardrails to prevent objects from falling from higher levels,
 - ii. Barricade the area into which objects could fall and prohibit entry,
 - iii. Keep objects at least at least ten feet away from outside edges and at least six feet away from inside floor openings to prevent accidental displacement.

6. FALL PROTECTION SYSTEMS

1. General Requirements for Guardrails (for additional information refer to OSHA 1926.502 for more details):
 - a) Top rail height 42 inches (+/- 3 inches) above the walking/working level.
 - b) Midrails, screens, mesh, intermediate vertical members or equivalent must be installed between the top rail and the walking/working surface when there is no wall parapet at least 21 inches high.
 - c) Midrails must be installed midway between the top rail and the walking/working surface (approximately 21 inches).
 - d) Screens and mesh, when used, must extend from the top rail to the walking/working surface and along the entire opening between the top rail supports.
 - e) Intermediate members (such as balusters), when used between the support posts, must be spaced not more than 19 inches apart.
 - f) When employees are using stilts, the top edge height of the top rail must be increased an amount equal to the height of the stilts. This requirement also pertains to such situations such as pan deck work where the employees are exposed to falls because their working surface height negates the effectiveness of the guardrail system. In such situations, the top rail height must be extended to provide protection equivalent to the standard approximate height of 42 inches.
 - g) Toprail systems must be constructed to be able to withstand a force of 200 lbs. applied within two inches of the top edge applied in any outward or downward direction at any point along the top edge. The 200 lbs. of pressure must not deflect the top edge of the guardrail to a height less than 39 inches above the walking/working surface.
 - h) Midrails, screens, mesh, vertical members, etc. must be capable of withstanding a force of 150 lbs. applied in any outward or downward direction.
 - i) Toe board must be capable of withstanding 50 lbs.
 - j) Guardrail surfaces must not present puncture or laceration hazards.
 - k) Any overhang on terminal posts must not constitute a projection hazard.
 - l) Wire cable when used as a guardrail (includes midrail), must not be less than ¼ inch in diameter. Top cable shall be flagged at least every six feet with high visibility material.
 - m) In hoist areas, a chain gate or removable guardrail system may be used, when the hoist area is not in use the chain gate or guardrail system must be in place. A personal fall arrest system must be used by the employees during the time that the chain gate or guardrail is not in place. No one except the personnel actually assigned to complete the job will be allowed in the area where the chain gate or guardrail is removed.
 - n) Guardrails must completely surround floor holes unless floor hole covers are used. When necessary, two sides of the floor hole guardrail system can be removed to allow for the movement of material but must be replaced or a hole cover used to provide the required protection when material handling operations have been completed. However, personnel exposed to falls during the time frame that the guardrails are removed must be protected by a personal fall arrest system.
 - o) Ladder openings protected by guardrails must utilize a gate or offset to prevent accidental entry.
 - p) Guardrails used on ramps and runways must be erected on all unprotected sides.
 - q) All guardrail systems must comply with OSHA 1926. 502 (b) (3), (4) and (5) which specify construction requirements.

2. Safety Nets:

- a) Must be installed as close as possible to the walking/working surface but in no case further than 30 feet below.
- b) Safety nets must extend from the outermost projection of the work surface as follows:

Vertical Distance from working level plane of the net	Minimum required horizontal distance to outer edge of the net from the working surface
Up to five (5) feet	Eight feet (8'-0)
Greater than five (5) feet up to ten (10) feet	Ten feet (10'-0)
Greater than ten (10) feet up to thirty (30) feet	Thirteen feet (13'-0)

- c) Structures, objects, projections, etc. must not present a hazard to someone falling into the safety net. A drop test must be performed as follows to ensure safe rigging and sufficient clearances:
 - i. A drop test must be performed at the job site after initial installation and prior to being used as a fall protection system.
 - ii. A 400-lb. bag of sand 30 inches in diameter (+/- 2") must be dropped into the net from 42 inches above the highest walking/working surface at which employees are exposed to fall hazards.
- d) Defective nets must not be used. Nets must be inspected prior to work start up each day, and a formal written inspection must be conducted at least weekly and/or after any occurrence which could affect the integrity of the safety net system.
- e) Debris must be removed from safety nets as soon as possible or at least before the next shift.
- f) Mesh openings in safety nets must not exceed six inches. Attachment openings must not exceed 36 square inches nor be longer than six inches on any side. Connections between safety net panels must be spaced no more than six inches apart.
- g) Safety net border ropes or webbing must have a minimum breaking strength of 5,000 lbs.

3. Personal Fall Arrest Systems:

- a) Safety harnesses, lanyards, positioning devices, and retractable life lines must be purchased from a commercial supplier who will ensure compliance with the specific material construction requirements for such fall protection equipment listed in the OSHA 1926 subpart M standard.
- b) Only locking type snap hooks are acceptable on safety lanyards used as part of a fall protection system.
- c) The practice of connection two or more lanyards together to form a longer lanyard is prohibited.
- d) On suspended scaffolds, vertical lifelines must be used equipped with rope grabs and shall have a minimum breaking strength of 5,000 lbs. When vertical lifelines are used, each employee must be provided with an individual vertical lifeline and OSHA 1926 subpart M shall be consulted for specific requirements.
- e) Horizontal lifelines must have a safety factor of at least two times the intended load.
- f) All lifelines must be protected from damage.
- g) Self-retracting lifelines must allow for a fall no greater than two feet.
- h) Shock absorbing lanyards must be used to limit shock-loading requirements specified in OSHA subpart M.
- i) Anchorage for fall arrest systems must be independent of suspended work platforms and capable of supporting at least 5,000 lbs. or designed by a qualified person with safety factor of at least two.

- j) All fall arrest systems must be installed and maintained under the guidance of a qualified fall protection competent person.
 - k) Lanyard attachment points must be in The Center Operating of the users back at shoulder height for full body harnesses.
 - l) Fall protection equipment must only be used to provide such protection and not used for any other purpose.
 - m) It is highly recommended that all fall arrest system components utilized be from the same manufacturer to reduce any confusion over compatibility and warranty.
 - n) Prompt means of rescue must be provided at the job site.
 - o) All employees required to utilize fall arrest systems must receive specific training on how to properly inspect such equipment and training records shall be maintained for inspection.
 - p) Personal fall arrest systems must not be attached to guardrail systems nor hoisting equipment.
 - q) Only cable of appropriate size for the intended load (including safety factor) must be utilized for horizontal lifelines allowing for lanyard locking snap hook attachment. Synthetic rope, manila, nylon, etc. must not be utilized as a HORIZONTAL lifeline.
4. Inspection:
- a) All personal fall arrest system components must be inspected by the employee before use for evidence of excessive wear, damage, or other defect or deterioration.
 - b) All damaged equipment must be removed from service and not used again until inspected and authorized by the manufacturer.
 - c) All fall arrest equipment subjected to shock loading must be removed from service and not used again until inspected and approved for use by the manufacturer.
5. Positioning Devices:
- a) Such devices cannot allow for a fall greater than two feet.
 - b) Can only be attached to anchorage that can withstand an impact load of 3,000 lbs. or two times the expected shock loading (whichever is greater).
 - c) Positioning device systems must be inspected before use.
 - d) Positioning device systems must only be used for worker safeguarding and not for any other purpose.

7. WARNING LINE SYSTEMS

- 1. Must be erected on all sides of roof work area.
- 2. When mechanical equipment is not being used, the warning line system must be erected at least six feet from the roof edge.
- 3. When mechanical equipment is running, the warning line system must not be erected less than six feet from the parallel roof edge nor less than ten feet from the roof edge which is perpendicular to the direction of the mechanical equipment's operation.
- 4. Points of access, material handling areas, storage areas and hoisting areas must be connected to the work area by an access path formed by two warning lines. When not in use, the path must be blocked to prevent entry into the area.
- 5. The warning system must be erected as follows:
 - a) The rope, chain, or wire must be flagged at no more than six foot intervals with highly visible materials and have a tensile strength of at least 500 lbs.
 - b) The rope, chain, or wire must not sag to less than 34 inches from the walking/working surface nor erected to a height greater than 39 inches.
 - c) Support stanchions must be capable of supporting at least 16 lbs. of force applied horizontally 30 inches above the walking/working surface perpendicular

to the warning line. The line must be attached to the stanchions in such a way that slack will not be taken up in adjacent sections before the stanchion tips over.

6. Employees not performing roof work must not be allowed between the warning line and the roof edge.
7. Mechanical equipment must only be used or stored on roofs in areas where employees are protected by a warning line system, guardrail system and/or personal fall arrest system.

8. CONTROLLED ACCESS ZONES

1. When used to control access to leading edge work, the area must be defined by a control line or other means which restricts access to the area.
 - a) Training must be conducted and all exposed employees must sign an attendance sheet before being allowed to work in a controlled access zone.
2. Control lines must be erected no closer than six feet to the leading edge nor further than 25 feet from the unprotected or leading edge.
3. When erecting pre-cast concrete members, the control line must be erected no closer than six feet nor further than 60 feet or half the member being erected, whichever is less, from the leading edge.
4. The control line must be parallel and extend along the entire length of the unprotected side or leading edge. The control line shall be connected on each side to a guardrail system or wall.
5. Controlled access for overhand bricklaying operations:
 - a) The control line must be erected no closer than 10 feet nor more than 15 feet from the working edge.
 - b) The control line must extend along the entire area where overhand bricklaying operations are taking place and shall be erected parallel to the working edge.
 - c) Additional control lines must be used to enclose the controlled access zone.
 - d) Only employees actually performing the overhand bricklaying operations may be allowed in the controlled access zone.
6. Control lines shall be erected as follows:
 - a) Ropes, chains, wires or equivalent material must have a minimum breaking strength of 200 lbs. and shall be flagged every six feet with high visibility material.
 - b) Each line must be erected so that the line is not higher than 45 inches from the working surface nor less than 39 inches (including sag).
 - c) On roofs or floors where guardrail systems are not in place, prior to beginning overhand bricklaying operations, controlled access zones must be enlarged as necessary to enclose all points of access, material handling areas, and storage areas.

9. SAFETY MONITORING SYSTEM

1. Safety monitor system must only be used with roof work.
2. The contractor or subcontractor must appoint a competent person to monitor the safety of all employees as follows:
 - a) The monitor must be trained in the requirements of this procedure and OSHA 1926, subpart M to recognize and evaluate the fall protection necessary to protect exposed workers.
 - b) The monitor must warn all employees when it appears that the employees are unaware of a fall hazard or is acting in an unsafe manner.
 - c) The monitor must be on the same working surface and in visual sight of the employees being monitored.
 - d) The monitor must be close enough to communicate orally with the employees.

- e) The monitor must not have any other duties assigned.
- f) The monitor must wear a Hi-Visibility Safety Vest.
- 3. Mechanical equipment must not be used or stored in areas where the safety monitoring system is being used to monitor employees on low pitched roofs.
- 4. Employees not engaged in roof work must not be allowed in the work areas being monitored.
- 5. All employees being monitored must be instructed to promptly comply with warnings issued by the monitor.
- 6. The Safety Monitoring System must be used in conjunction with a Controlled Access Zone.

10. HOLE COVERS

- 1. Covers used on roadways for vehicular traffic must be capable of supporting at least twice the expected load of the largest vehicle (axle load) anticipated to cross over the cover.
- 2. All other covers must be capable of supporting at least twice the weight of employees, equipment and materials that may be imposed on the cover at any one time.
- 3. All covers must be secured to prevent accidental displacement.
- 4. All covers must be color coded or labeled "Hole" or "Cover" to provide warning of the hazard.
- 5. These requirements do not apply to cast iron manhole covers or steel grates used on streets or roadways.

11. PROTECTION FROM FALLING OBJECTS

- 1. Toeboards must be capable of withstanding a force of at least 50 pounds applied in any downward or outward direction at any point along the toeboard.
- 2. Toeboards must be a minimum of 3 ½ inches in vertical height and there shall be no more than a ¼ inch gap between the toeboard and the walking/working surface.
- 3. Where materials or tools are piled higher than the toeboard, screening or paneling must be installed between the working surface and the top rail to prevent such materials, tools, or equipment from being accidentally displaced.

12. TRAINING

- 1. Fall protection training must be conducted for all affected employees and will cover at least the following topics:
 - a) Nature of fall hazards at the site
 - b) The site specific fall protection plan
 - c) The use, inspection and maintenance of fall prevention and fall arrest systems employed at the site, and
 - d) Safe practices outlined in this procedure and OSHA 1926 subpart M.
 - e) Reporting procedures for fall hazards.
- 2. Retraining must be conducted as necessary or when one of the following circumstances occur:
 - a) Employees do not demonstrate an understanding or required skill to comply with this policy.
 - b) Changes in site conditions and/or equipment that render previous training obsolete.
- 3. Competency:
 - a) All employees completing the fall protection training may be required to demonstrate their understanding of the material presented through testing, skill demonstration, supervisory observation, etc.

EXCAVATION

1. SCOPE AND APPLICATION

This policy highlights the OSHA excavation requirements found in 29 CFR 1926.650. It is not intended to replace the need to review the actual standard that contains greater detail.

This policy applies to all open excavations made in the earth's surface.

For the purposes of this policy and excavation is any man made cut, cavity, trench, or depression in the earth's surface. Since the requirements for trenches are explicit and in some cases more restrictive than for general excavations the definition of Trench as used herein is: a narrow excavation made below the surface of the ground, where the depth is greater than the width, and the width does not exceeding 15 feet.

2. GENERAL REQUIREMENTS

Existing Utilities

Before any excavation actually begins, the Contractor must determine the estimated location of all utility installations i.e. sewer, telephone, fuel lines, underground and overhead electric, water lines, or any other underground installations that may be encountered during excavation. Also, before starting the excavation, the contractor must contact the utility companies or utility owners involved and inform them, within established or customary local response times, of the proposed work. Utility companies or owners must be asked to locate all underground utilities and allow at least 24 hours for them to do so, before excavation work is started.

1. In the event that they cannot find the exact location of the utility installations, the contractor may proceed with caution. Employees must use safe and acceptable means to locate the underground installations.
2. If underground installations are exposed during excavation or trenching operations, they shall be removed protected or properly supported.

Safety Considerations

The contractor must determine the amount and type of safety equipment required for the excavation and trenching operation. H-E-B considers the soil at all JOBSITES as Class "C" soil. No matter how many trenching, shoring and back filling jobs have been done in the past, each job must be approached with the utmost care and preparation. Consideration must be made for the following as a minimum:

1. Type of soil excavating (TYPE C Soil).
2. Type of Sloping and/or Shoring that must be used in type "C" soil.
3. Employee access and egress.
4. Location of equipment, materials and stockpiles.
5. Possibility of hazardous atmospheres.
 - a) Gas metering equipment.
 - b) Rescue equipment (Harness, lifeline, tripod etc.)
6. Rescue procedures in case of an injury or cave-in.
7. Personal protective equipment requirements.
 - a) Traffic vests.
 - b) Hard hats.
 - c) Safety glasses.
 - d) Work Boots.
8. Operators must be trained in the proper and safe operation of any equipment which they might be expected to operate during the excavation and trenching operation.
9. A competent person for excavation and trenching must be on site during all excavation and trenching operations.

- a) A competent person is one who has received formal training on the OSHA standard and 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.
10. Adequate precautions must be in place to protect employees working in excavations, against the hazards posed by water accumulation.
11. Employees must be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations.
 - a) Protection must be provided by placing and keeping such materials or equipment at least two (2') feet from the edge of excavations.
 - b) Flag person or stop logs must be provided when equipment approaches the edge of an excavation (such as dumping backfill material).
12. A stairway, ladder, or ramp must be used as a means of access or egress in trench excavations that are four feet or more in depth. The ladder(s), stairways(s), or ramp must be spaced so that no employee in the trench excavation is more than 25 feet from a means of egress. When ladder(s) are employed, the top of the ladder must extend a minimum of three feet above the ground and be properly secured.
13. Employees must not be permitted underneath loads handled by lifting or digging equipment.
 - a) Employees must be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling material.
 - b) Employees may remain in cab of trucks equipped with overhead protection.
14. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning must be provided to ensure the stability of such structures for the protection of employees.
15. Sidewalks, pavement, and appurtenant structure may not be undermined unless a support system such as shoring is provided to protect employees from the possible collapse of such structures.

Permit Requirements

A permit must be obtained for any excavation three feet or more in depth.

In excavations where oxygen deficiency or gaseous conditions exist, or could reasonably be expected to exist, a confined space permit must be obtained.

1. Where oxygen deficiency (atmosphere containing less than 19.5% oxygen) exist, the area must be continuously ventilated until the oxygen levels are at an acceptable level (between 19.5% and 20.5%).
2. Where a gaseous condition exists, the area must be ventilated until the flammable gas concentration is below 10% of the lower flammable limits.
3. All requirements of the confined space permit must be followed.

3. PROTECTIVE SYSTEMS

The major cause of serious injury to or death of an employee working in an excavation comes from cave-ins. When the danger of collapse exists, trenches and excavations less than 5' in depth must also be protected, especially when an employee's entire body is below grade, by one of the following systems. It is due to the seriousness of this type of accident that the following requirement must be met.

General Requirements

All excavation five feet or more in depth must be protected from cave-in by one of the following methods.

1. Sloping, or benching the sides of the excavations.
2. Shoring the sides of the excavation.
3. Placing a shield between the side of the excavation and the work area.

All excavations, which are twenty feet or more in depth, must be designed by a registered professional engineer.

All excavations where the contractor elects to use the sloping or benching of the banks to prevent cave-in must:

1. Be sloped as required by the OSHA standards for the class of soil encountered.
2. Be benched in such manner that the first vertical rise no greater than four feet.
3. The equivalent slope of all benching must match that required by the OSHA standards for the class soil encountered.

All shoring systems must meet the requirement of the OSHA standards for the construction industry 29 CFR 1926.650 and be;

1. Designed using information from the tabulated data shown in the OSHA manual.
2. Designed using tabulated data prepared by a registered professional engineer for the soil type encountered.
3. Designed using Manufacturer's tabulated data for the soil conditions encountered.
4. Designed by a registered professional engineer.

At least one copy of the information, including the identity of the registered professional engineer who approved the data, must be kept at the work site during construction of the protective system. Upon completion of the system, the data may be stored away from the job site, but a copy must be made available, upon request, to the Assistant Secretary of Labor for OSHA.

A trench shield (or trench box) may be used which has either been:

1. Designed or approved by a registered professional engineer,
2. Or based on tabulated data prepared or approved by a registered professional engineer

Shoring systems and trench shields must extend down to within two feet of the bottom of the excavation and eighteen inches above the top of vertical banks.

Excavation below the level of the base or footing of any foundation or retaining wall is prohibited unless;

1. A support system such as underpinning is provided,
2. The excavation is in stable rock, or
3. A registered professional engineer determines that the structure is sufficiently removed from the excavation and that excavation will not pose a hazard to employees or the structure.

Excavations under sidewalks and pavements are also prohibited unless an appropriately designed support system is provided or another effective method is used.

Whenever support systems, shield systems, or other protective systems are being used, a copy of the manufacturer's specifications, recommendations, and limitations must be in written form and maintained at the job site.

Installation and Removal of Protective Systems

The following procedures are required for the protection of employees when installing support systems:

1. Securely connect members of support systems,
2. Safely install support systems,
3. Never overload members of support systems, and
4. Install other structural members to carry loads imposed on the support system when temporary removal of individual members is necessary.

As soon as work is completed, the excavation should be back filled as the protective system is dismantled.

1. Employees should slowly remove the protective system from the bottom up, taking care to release members slowly.

2. Remove shoring at a rate consistent with the backfilling operation.

Inspection Requirements

A competent person must perform the following inspections:

1. Perform daily inspection of protection equipment, trench conditions, and adjacent areas.
2. Inspections must be made prior to the start of work and as needed throughout the shift.
 - a) Includes atmosphere testing.
3. Inspections must be made after every rainstorm or other hazard-increasing occurrence.

The competent person must:

1. Remove employees from hazardous conditions and make all changes necessary to ensure their safety.
2. Categorize soil conditions and conduct visual and manual tests.
3. Determine the appropriate protection system to be used.
4. Obtain appropriate permits when needed.
5. Maintain on-site records of inspections and protective systems used.

MATERIALS AND EQUIPMENT

The contractor is responsible for the safe condition of materials and equipment used for protective systems. Defective and damaged materials and equipment can result in the failure of protective system and cause excavation hazards.

1. To avoid possible failure of a protective system, we must ensure that
 - a) Materials and equipment are free from damage or defects,
 - b) Manufactured materials and equipment are used and maintained in a manner consistent with the recommendations of the manufacturer,
 - c) While in operation, materials and equipment are examined by a competent person to determine if they are suitable for continued use.
 - d) Materials and equipment which are not safe for use are removed from service,
 - e) Damaged materials are not returned to service without the evaluation and approval of a registered professional engineer.

4. SIGNS AND BARRICADES

All signs and barricades required by this section must meet the requirement of the section of this manual titled "Signs, Signals and Barricades".

1. All excavations, which are obstructed from the view of employees, either on foot or in a vehicle must be barricaded, or fenced.
2. No excavation must be left open over night with out substantial barricades being placed along all open sides.
3. Warning signs must be posted at fifty-foot intervals on all excavations that will remain open for more that 24 hours.
4. In areas subject to vehicle traffic, barricades must be equipped with flashing lights if left in place after sundown.

5. Confined space "Permit Required Before Entry" signs must be placed at the access points to all excavations which have or are reasonable expected hazardous atmospheres.

FIRE PREVENTION, PROTECTION & CONTROL

1. SCOPE AND APPLICATION

The following sets forth the minimum requirements for Fire Prevention, Protection and Control for the project. All contractors will be required to comply with these requirements. Additionally each contractor will meet the requirements of OSHA 29 CFR 1926 sub part F.

2. GENERAL REQUIREMENTS

Contractors are responsible for assigning an individual to implement the fire protection, prevention and control programs for the contractor's scope of work. The minimum program requirements are:

1. Training of personnel
2. Inventory of available firefighting equipment as required by scope of work.
3. Weekly inspection of firefighting equipment.
4. Weekly inspection of flammable material storage.
5. Periodic inspection of contractors operations to verify compliance with this section.

3. FIRE PREVENTION

Keep work and storage areas clean and free of flammable or combustible debris at all times. Ensure that all flammable and combustible materials are stored properly; with all flammable liquids and gases separated from other flammable materials.

Dispose of all rags which have oil, grease, paint thinners and cleaning agents that may be combustible in accordance with applicable local, state and federal regulations.

All internal combustion engine powered equipment shall be inspected and repairs made, if such hazards as igniting of fuel exist.

1. Fueling area or stations
 - a) **"No Smoking"** signs must be posted and enforced.
 - b) **"Turn Engines Off"** signs must be posted and enforced in the same area.
 - c) Bonding of equipment to be fueled must be accomplished through the use of internally grounded hose or an external ground cable.
2. Make sure that fuel distributors fuel tank, dispensing hose, and nozzle comply with federal, state and local regulations.
3. Only approved industrial metal safety cans will be used for the handling and storage of flammable and combustible liquids up to 60 gallons and must be labeled as to the contents.
4. Portable storage tanks with the capacity of 60 gallons or more must be:
 - d) Plainly marked as to contents.
 - e) At least 50 feet away from any building.
 - f) Kept free from debris, trash, grass, and weeds at all time.
 - g) Properly vented, if storing 600 gallons or more.

5. Project Safety Coordinator must be contacted for additional rules governing fueling depots or storage areas for flammable liquids.

4. FIRE PROTECTION AND CONTROL

Provide access roads for emergency vehicles from the start of the project, and maintain clear access to the building and storage area at all times. Coordinate the access with the local Fire Department to ensure it meets the requirements of the equipment that will respond in case of a fire.

Install and activate building fire standpipes and sprinkler systems as soon as practicable in the construction schedule.

Comply with the following basic rules of fire protection and control.

1. Phone numbers of the nearest fire station or department must be posted at job site telephones.
2. All two ton or larger trucks and cranes must be equipped with not less than a 2B ABC type fire extinguisher. (Winch trucks, haul trucks, draglines, and cranes--track, rubber tire or railroad car mounted).
3. Fire extinguisher rated not less than 2B shall be furnished for each 3000 square feet (or portion there of) of the building and located so that the maximum travel distance from any point will not exceed 100 feet.
4. Fire extinguisher rated not less than 2B shall be located at each floor adjacent to stairways.
5. A fire extinguisher rated not less than 10B shall be provided within 50 feet of wherever more than five gallons of flammable or combustible liquids or five pounds of flammable gas are being used on the job site. This requirement does not apply to the integral fuel tanks of motor vehicles.
6. Carbon tetrachloride and other toxic vaporizing fire extinguishers are prohibited.
7. All fire extinguishers must be inspected every month and serviced at least every twelve months with refills and repairs made by a local dealer licensed by the state to service the fire extinguisher or suppression system used.
8. Familiarize yourself along with the members of the crew with the use and care of these extinguishers. In case of a fire make sure everyone knows where the fire extinguishers are and how to use them. Supervisors must conduct a tool box safety meeting on this subject at least annually and with new employee/owners.
9. Smoke only in designated areas. Make sure to extinguish matches/cigarettes and place them in approved containers.
10. Minimize the amount of flammable liquids/gases kept at the work area to a single work shift supply.
11. Close containers of flammable liquids when not in use. Report spills and the location of excessive flammable vapor/gas concentrations immediately.
12. Obtain the necessary permits when performing hot work or disabling fire protection systems.

13. Make sure materials and equipment does not block the access to extinguishers and fire protection hoses, hydrants, and standpipes. Also, make sure materials are kept at least 18 inches from sprinkler heads.
14. Attempt to extinguish small fires (trash can size) only if trained to do so. If trained to extinguish fires, familiarize yourself with the location of fire extinguishers in the work area.
15. At least one portable fire extinguisher of not less than 20 B rating must be located not less than 25 feet or more than 75 feet from a flammable combustible liquid storage area located outside.
16. Fire extinguisher location plans must be prepared before construction of a structure begins. Fire extinguishers must be placed according to the plan prior to bringing flammable materials in the area.

WELDING & CUTTING

1. SCOPE AND APPLICATION

This section set forth the minimum requirements for all welding and cutting on the project. Due to the possibility of starting fires with these operations a "Hot Work Permit" will be required for all welding and cutting operations (See Appendix A). The requirements stated herein apply to all contractors working on the project.

2. WELDING

All welding operation will comply with the following general guidelines:

1. A suitable fire extinguisher or other fire control device must be ready for instant use in any location where welding is done. Where welding must be performed near combustible materials, a helper or other extra person shall be on hand to guard against fire.
2. Screens, shields, or other safeguards must be provided for the protection of workers or combustible materials below or otherwise exposed to sparks or falling objects. When others must work nearby they must be protected from the arc rays by screens or by other adequate individual protection.
3. When welding or cutting lead, zinc, cadmium-coated, lead-bearing, or other toxic materials, provision must be made for the removal of fumes or the use of proper personal respiratory protection. Contact your Safety Coordinator to assist with evaluation and control methods.
4. Protective clothing required for any welding operation may vary with the size, nature, and location of the work.
 - a) Some suggested protective measures for welders and helpers are:
 - i. Flame-resistance gauntlet gloves to be worn except where welder is engaged in light work.
 - ii. Flame-resistant aprons of leather, or other suitable material as protection against radiated heat and sparks.
 - iii. Clothing should be free of oil and grease. Woolen clothing is not as readily ignited as untreated cotton. Welders or helpers may not wear double-knits or nylon.
 - iv. Pockets and cuffs invite sparks. Collars and cuffs must be buttoned and cuffs turned up inside pants. Pockets must be eliminated from the front of vests, shirts, and aprons or provided with buttoned flaps.
 - b) Low-cut shoes with unprotected tops are not permitted.

5. Fire-resistant capes and shoulder covers must be worn during overhead welding operations. Ear protection is recommended to prevent hot slag from entering the welder's ears (**never use cotton**).
6. Fire retardant clothing is recommended for welding operations generating large quantities of hot slag.
7. Prior to commencing work, all work specific and area hazards must be understood and communicated and all appropriate permits must be obtained.
8. All personnel in the surrounding work area must be properly warned of the hazardous work area by the use of barricades or other communication means.
9. Prior to work, within 35 feet of work area:
 - a) flammable liquids, dust lint and oily deposits must be removed
 - b) explosive atmosphere must be eliminated or if not possible, monitored
 - c) floors must be swept clean
 - d) combustible floors wet down, combustibles in the area must be removed or covered with fire resistive protection
 - e) Floor and wall openings must be covered or fire resistive tarpaulins suspended beneath work.
 - i. OSHA defines flammable as being easily ignited, burning intensely, or having a rapid rate of flame spread. Flammable liquid means any liquid having a flash point below 140°F.
 - ii. OSHA defines combustible liquid as a liquid having a flash point at or above 140°F and below 200°F.
 - iii. OSHA defines flash point as the temperature at which it gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid.
10. Hot Work may not be conducted in any area classified as a Class I, Division I or II area according to the current Uniform Fire Code. Contact your Safety Coordinator for questions.
11. Respiratory protection is not required for most welding jobs if good ventilation is provided.
12. When the welding, cutting, or heating operation is such that normal fire prevention precautions are not sufficient, additional personnel shall be assigned to guard against fire while the actual welding, cutting, or heating operation is being performed and for sufficient period of time (not less than 30 minutes) after completion of work to ensure that no possibility of fire exists. Such personnel shall be instructed as to the specific anticipated fire hazards and how the firefighting equipment provided is to be used.
13. Welding screen is required to protect adjacent workers from exposure to non-ionizing radiation. Adjacent workers are required to wear appropriate eye protection where screens are not feasible. Welder's assistants and those working inside the screened in area must wear appropriate eye protection.

3. VENTILATION & PROTECTION IN WELDING, CUTTING & HEATING

1. Welding, cutting and heating may normally be done without mechanical ventilation or respiratory protective equipment, but where, because of unusual physical or atmospheric conditions, an unsafe accumulation of contaminants exist suitable mechanical ventilation or respiratory protective equipment shall be provided.
2. Employee/owners performing any type of welding, cutting or heating shall be protected by suitable eye protective equipment.
3. Other employee/owners exposed to the same atmosphere as the welders or burners shall be protected in the same manner as the welder or burner. All welders and welders' helpers are to wear safety tinted glasses when exposed.

4. In confined spaces where welding, cutting, or heating metals that contain zinc, lead, cadmium, mercury, chromium, beryllium, or covered with preservative coatings, or working with inert gas arc welding is taking place then check with your Safety Coordinator concerning the recommended safe operating procedures, air sampling, and control methods.

4. **ARC WELDING**

Welding equipment shall meet the following:

1. Only standard electric arc welding equipment conforming to the requirements of the National Electrical Manufacturers Association or the Underwriters Laboratories, Inc., or both, shall be used.
2. Power circuits shall be installed and maintained in accordance with the National Electrical Code. Check to see what voltage the machine is wired for before connecting.
3. Check the manufactures requirements for grounding the electric welding machine operated from power circuits.
4. Electrode and ground cables should be supported so as not to create obstructions interfering with the safe passage of workers. The ground lead for the welding circuit should be mechanically strong and electrically adequate for the service required. Grounding should be accomplished as close to the welding operation as possible.
5. Adequate exhaust to the outside shall be provided where internal combustion engines are used to operate welding machines in enclosed spaces.
6. All welders must wear combination safety hard hats and welding hoods.
7. The proper shade of welding lens is required and an adequate supply of cover lenses shall be available. Personnel assisting operators should also wear protective lenses to avoid "welding flash" burns to the eyes.
8. Manual electrode holder shall be of a capacity capable of safely handling the maximum rated current required by the electrodes being used.
 - a) They shall be fully insulated against the maximum voltage encountered to ground.
9. Welding Cables and Connectors
 - a) All arc-welding cables shall be of the completely insulated, flexible type capable of handling the maximum current requirements of the work in progress. When it becomes necessary to connect or splice lengths of cable one to another, they shall be securely fastened together to give good electrical contact, and the exposed metal parts shall be completely insulated.
 - b) Cables in poor repair shall not be used. If a cable becomes worn to the extent of exposing bare conductors, the portion thus exposed shall be protected by means of rubber and friction tape or other equivalent insulation.
 - c) Insulation repairs using tape shall not be allowed within ten (10) feet of the electrode holder (stinger).
10. The frames of all arc-welding machines shall be grounded either through a third wire in the cable containing the circuit conductor or through a separate wire, which is grounded at the source of the current. Always follow the manufacture's requirements for grounding of welding machines.
11. When electrode holders are to be left unattended the electrode shall be removed and the holder shall be so placed or protected that they cannot make electrical contact with employee/owners or conducting objects.
12. Hot electrode holders shall not be dipped in water.
13. Any faulty or defective equipment shall be reported to the supervisor.
14. Electrodes shall not be struck against a compressed gas cylinder to strike an arc.

5. **GAS WELDING AND CUTTING**

Storage of all compressed gas cylinders will conform to the following:

1. Cylinders must be stored in designated places where they will not be damaged by passing or falling objects. Storage facilities must be designated as a non-smoking area

and posted with the names of the gases to be stored. Outside storage of cylinders must be protected from adverse weather conditions.

2. Oxygen cylinders shall be stored at least 20 feet from other flammable material.
3. Full, unused cylinders must be kept in a designated area, separate from empty cylinder.
4. Oxygen and oxidizing gas cylinder must be stored separate from flammable-gas cylinders (i.e. Acetylene, Propane, etc.) or combustible materials (especially oil or grease) by a minimum distance of twenty feet or by a non-combustible barrier, at least five feet high, having a fire resistance rating of at least one-half hour. This does not include oxy-acetylene carts.
5. Valve protection caps shall be in place and secured.
6. Compressed gas cylinders shall be secured in an upright position at all times, except if necessary for short periods of time while cylinders are actually being hoisted or carried.
7. All compressed gas cylinders must be identified by a legibly marked label or stencil rather than by color of cylinder. Cylinder color must not be relied upon for content identification. Department of Transportation (DOT) labels are required if shipped over the road.
8. Do not accept for use any cylinder that is not identified by a legible label or stencil. Cylinders of this type must be tagged and returned to the supplier.
9. When emptied, all compressed gas cylinders are to be marked, by the person who emptied the cylinder, as "EMPTY" or "MT". Only the vendors who refill the tanks may remove these markings.

The transpiration and moving of compressed gas cylinders will conform to the following:

1. When cylinders are hoisted, they shall be secured on a cradle, sling, board, or pallet. They shall not be hoisted or transported by means of magnets or choker slings.
2. Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck, or permitted to strike each other violently.
3. When cylinders are transported by power vehicles, they shall all be secured in a vertical position.
4. Valve protection caps shall not be used for lifting cylinders from one vertical position to another.
5. Unless cylinders are firmly secured on a special carrier intended for this purpose, regulators shall be removed and valve protection caps put in place before cylinders are moved.
6. A suitable cylinder, truck, chain, or other steadying device shall be used to keep cylinders from being knocked over while in use.

Placement of cylinders for use will conform to the following:

1. Cylinders shall be kept far enough away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them.
2. Cylinders shall be secured to prevent over turning during use.
3. Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces.

Hoses for gas welding or cutting equipment will conform to the following:

1. Hoses will be color coded for oxygen and acetylene with connections, which are not interchangeable.
2. All hoses used in carrying acetylene, oxygen, or any other gas or substance, which may ignite, must be inspected at the beginning of each working shift. Defective hoses must be removed from service.
3. Hoses which have been subject to or which shows evidence of wear or damage must be tested to twice the normal pressure to which it is subjected to under normal working conditions. Defective hoses or hoses in doubtful condition may not be used.

4. Hose coupling must be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion.
5. Boxes used for the storage of gas hose must be ventilated.
6. Hoses and other equipment must be kept clear of passage ways, ladders, and stairs.

All torches used for cutting or welding will be used and maintained in conformance with the following:

1. Clogged torch tip openings must be cleaned with suitable cleaning wires, drills, or other devices designed for such purpose.
2. Torches in use must be inspected at the beginning of each working shift for leaking cut-off valves, hose couplings, and tip connections. Defective torches may not be used.
3. Torches must be lighted by friction lighters or other approved devices and not by matches or cigarette lighters. The use of hot work as a means of lighting torches is not permitted.
4. Torches must be equipped with flash back arrests (not check valves). Consult with the torch manufactures regarding this issue and follow their recommendations.

All regulators and gauges being used for cutting and welding will be in conformance with the following:

1. Oxygen and fuel gas pressure regulators, including their gauges, must be in proper working order while in use.
2. Regulators and gauges must be kept free of grease and dirt at all times.
3. Regulators with broken gauge glass, missing screws, etc. must be taken out of service and repaired or discarded.
4. Regulators are to be equipped with built-in or external check valves.

6. CHIPPING, CLEANING & GRINDING

The following equipment and procedures will be used for chipping, cleaning and grinding operations:

1. When removing excess weld metal, faulty welds, or slag, safety glasses with a face shield must be used.
2. Gloves must be worn to protect the hands and wrists from flying chips. The danger to other personnel in the area may require screening or shielding.
3. When chipping or cleaning welds always chip away from the body
4. When cleaning and brushing surfaces to be welded, use caution to avoid metal slivers and sharp edges.
5. Gauntlet style gloves are advisable during all chipping, cleaning and grinding operations.

HOUSEKEEPING

Housekeeping begins at the start of the project and should continue each day until the project ends. All material storage is to conform to OSHA 29 CFR 1926.250.

- I. Large rocks, asphalt chunks, pieces of concrete and other materials should be picked up, cleaned up and stacked as the job progresses.
- II. Broken pipe, manhole sections, unused pipes, grates and frames, etc. should not be left scattered throughout the project.
- III. When pea gravel, bedding material, sand or selected backfill material are stockpiled, they should be located where they will not constitute a traffic hazard (driving or walking).
- IV. All barricades, cones, detour signs, etc. should be kept in good working condition, used properly, and stored in an orderly fashion.
- V. Maximum safe load limits shall be posted for all floor and surfaces in buildings where materials may be stored. These maximum limits shall be observed at all times.
- VI. All passageways shall be kept free of materials and supplies to allow for the safe movement of employees and materials.

- VII. All materials shall be stored in such a manner as to prevent falling, shifting or collapse.
- VIII. No material shall be stacked within six feet of any stairwell, hoistway, or inside floor opening.
- IX. Materials shall not be stored on scaffolds in quantities greater than needed for one day's use.
- X. All bagged materials shall be stacked with the layers stepped back and interlocked to prevent the stack from slipping or otherwise shifting.
- XI. Lumber shall be stacked on level and solid supports. Lumber shall not be piled higher than 20 feet, except in the case where the lumber is handled manually, where the maximum height shall be limited to 16 feet. All nails shall be removed from used lumber before storage.
- XII. Structural steel, poles, pipes, bars and similar materials shall be stored in racks or otherwise confined so as to prevent shifting, spreading or falling.
- XIII. An enclosed chute or slide made of wood or equivalent, shall be used whenever materials are dropped more than 20 feet to any point outside the exterior walls of the building.
- XIV. When material is dropped through openings in the floor without the use of chutes, the area onto which the material is dropped should be completely enclosed, with barricades not less than 42 inches high and not less than 6 feet back from the side of the opening above. Personnel shall be notified of the hazard of falling via posted signs at each affected level.
- XV. All scrap lumber, waste materials, and rubbish shall be removed from the immediate work areas on a continuous basis.



GENERAL RELEASE OF LIABILITY - VENDORS AND VISITORS (FORM 9)

In consideration of my being granted to enter the site of this construction project, I hereby for myself, my successors, assigns, executors, administrators and personal representatives, remise, release, and forever discharge H-E-B and its officers, agents, employees, consultants and CONTRACTORS and assigns, acting officially or otherwise, from any and all claims, demands, actions, or cause of action, on account of my death or on account of injury to me which may occur from any cause while I am on the site.

I accept full responsibility for my safety and agree to fully comply with all safety rules and regulations while on the job site.

I HAVE READ THE ABOVE AND UNDERSTAND IT.

Signature: _____

Print Name: _____

Date: _____

Witness Signature: _____



ORIENTATION DOCUMENTATION (FORM 10)

- I. Safety Program
 - A. OWNER's attitude.
 - B. CONTRACTOR's attitude.
 - C. Project safety rules.
 - D. Evacuation Routes
 - E. Substance Abuse and Weapons Policy.
- II. Fall Protection
 - A. Training
 - B. Identify walking and working surfaces
 - C. Fall arrest systems are required to meet all compliance standards
 - a. Inspection completed daily
 - D. Plan prior to work
 - E. Competent
- III. Personal Protective Equipment
 - A. Hard hat, substantial footwear, safety eye glasses and hearing protection.
 - B. Proper clothing.
 - C. Other protective equipment.
 - D. Material Handling
- IV. Hazard Communication Program
 - A. Requirements of the law.
 - B. Location of inventory and MSDS's.
 - C. Use of MSDS.
 - D. Specific chemicals used on the site.
- VI. Substance Abuse Policy and Weapons Policy
 - A. Drug and Alcohol Testing – Random, Post Accident, & Random
 - B. Weapons & Workplace Violence

I have received an initial job orientation as outlined above, to include a discussion of the hazard communication program and a copy of the safety rules pertinent to my area.

Employer: _____

Printed Name: _____

Employee Signature: _____

Date: _____

Trainer Signature: _____

Date: _____



HAZARD ANALYSIS/TOOLBOX SAFETY TRAINING (FORM 11)

PROJECT: _____ CREW: _____ TASK: _____ DATE: _____
 SUPERVISOR: _____

ACTIVITIES TO PERFORM	TOOLS/EQUIP/MAT'L	POSSIBLE INJURY	CONTROLS/PLAN

Special Topic / MSDS: _____

Crew: _____



HAZARD COMMUNICATION TRAINING DOCUMENTATION (FORM 12)

I hereby acknowledge that I have received hazard communication training as required by OSHA 1910.1200. The training explained the law; the materials I may be exposed to (including the hazards and controls); how to use an MSDS; where the MSDS's chemical list and the written program may be found; and the proper detection, first aid and spill control procedures.

Employee Signature: _____

Date: _____

Trainer Signature: _____

Date: _____



SUPERVISORS FIRST REPORT OF INCIDENT (FORM 13)

Date: _____

Company Name: _____

Supervisor: _____

Date of Incident: _____ Time of Incident: _____ AM / PM

Type of Incident:

- Near Miss; Employee Injury; Property Damage; Spill; SWPPP

Name of employee involved or injured: _____

Description of Incident:

Nature of Injury, Damage, or Spill:

Contributing Causes:

Initial Plan to prevent recurrence of incident:

Signed By:

Title:



SAFETY EMPHASIS POINTS (FORM 14)

Date: _____ Auditor: _____ Sub: _____

Carpentry Trade	Yes	No	Not Observed
Personnel use pneumatic tools, such as nail guns, at <100 psi or with a safety device requiring the weight of the tool plus 5lb to fire.			
Personnel lower tools with ropes or other devices (rather than by electrical cords or pneumatic hoses).			
Personnel using power tools (e.g. saws, drill motors, sidegrinders, fasteners, etc.) with positive pressure switches.			
Personnel using power tools with guards in place.			
Personnel remove nails from scrap lumber immediately.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			

Electrical – General	Yes	No	Not Observed
Personnel using portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel using portable extension cords used with no breaks in their insulation and protect them from damage.			
Personnel using portable extension cords that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			

PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			

Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			

Ladders & Scaffolds – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladders at all times.			

CONCRETE & MASONRY SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Concrete & Masonry Trade	Yes	No	Not Observed
Protective caps are in place when personnel work over re-bar.			
Personnel using masonry saws only use them with the guard in place.			
Personnel barricade the area below block laying operations.			
Personnel keep from underneath hoisted concrete buckets.			
Personnel stand out of vicinity of jacks during tensioning operations.			
Personnel applying concrete with pressurized hose systems wearing faceshields.			
Personnel pouring/finishing/forming concrete wearing long sleeved shirts, gloves, and rubber boots.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			
Electrical – General	Yes	No	Not Observed
Portable electrical tools and appliances used with a ground fault circuit interrupter.			
Portable extension cords used with no breaks in their insulation and protect them from damage.			
Portable extension cords in use are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			
Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders & Scaffolds – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a minimum 4:1 pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			



DRYWALL/PLASTERING SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Drywall/Plastering Trade	Yes	No	Not Observed
Personnel use pneumatic tools, such as nail guns, at <100 psi or with a safety device requiring the weight of the tool plus 5lb to fire.			
Personnel use rolling scaffolds that are fully decked with wheels locked and all guard rails and toeboards in place.			
Personnel use step ladders or stools to reach work areas (as opposed to inverted buckets, etc.)			
Personnel use power tools (e.g. saws, drill motors, sidegrinders, fasteners, etc.) with positive pressure switches.			
Personnel use power tools with guards in place.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			
Electrical – General	Yes	No	Not Observed
Personnel use portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in their insulation and protect them from damage.			
Portable extension cords in use that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wearing safety glasses with sideshields in construction areas.			
Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders & Scaffolds – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			

ELECTRICAL SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Electrical Trade	Yes	No	Not Observed
Personnel using tools with insulated handles and non-conductive ladders when working around live equipment.			
Personnel using double insulated or grounded electrically powered tools.			
Personnel remove metal jewelry and other metallic objects from the body when working with live circuits.			
Personnel place equipment in a zero energy state prior to installation or maintenance work.			
Electrical – General	Yes	No	Not Observed
Personnel using portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in their insulation and protect them from damage.			
Personnel using portable extension cords that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wearing hardhats in construction areas.			
Personnel wearing safety glasses with sideshields in construction areas.			
Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders & Scaffolds - General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			



EXCAVATION AND LAND DEVELOPMENT SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Excavation & Land Development Trade	Yes	No	Not Observed
Personnel entering confined spaces have obtained the necessary permits and documented training.			
Personnel enter trenches only when shored or sloped.			
Personnel enter trenches only when the spoil pile is kept at least two feet from the edge of the trench.			
Personnel do not enter trenches without access/egress at least every 25 feet.			
Personnel entering confined spaces have obtained the necessary permits.			
Personnel do not enter or remain in a confined space without an authorized attendant present.			
Personnel working in or crossing site-clearing operations wear flagging garments.			
Personnel operating earth-moving equipment with ROPS wear seat belts.			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			
Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			

MECHANICAL SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Mechanical Trades	Yes	No	Not Observed
Personnel entering confined spaces have obtained the necessary permits and training.			
Personnel do not enter or remain in a confined space without an authorized attendant present.			
Personnel use power tools (e.g. drill motors, sidegrinders, fasteners, etc.) with positive pressure switches.			
Personnel use power tools with guards in place.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			
Personnel place equipment in a zero energy state prior to installation or maintenance work.			
Welding & Cutting	Yes	No	Not Observed
Personnel employ firewatches during each operation.			
Personnel obtain permits for each operation.			
Personnel use rated eye protection for flash burn.			
Personnel remove or cover combustibles.			
Personnel have a fire extinguisher on hand during operations.			
Electrical – General	Yes	No	Not Observed
Personnel use portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in their insulation and protect them from damage.			
Portable extension cords in use that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			
Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders & Scaffolds – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and			



set at 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			

PAINTING SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Painting Trade			
	Yes	No	Not Observed
Personnel wear respiratory protective equipment when painting.			
Personnel do not paint in the vicinity of ignition sources.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			
Electrical – General			
	Yes	No	Not Observed
Personnel use portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in the insulation and are protect them from damage.			
Portable extension cords in use that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General			
	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			
Fall Protection – General			
	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders & Scaffolds – General			
	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			

PLUMBERS & PIPEFITTERS SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Plumbers & Pipefitters Trade	Yes	No	Not Observed
Personnel use power tools (e.g. drill motors, sidegrinders, fasteners, etc.) with positive pressure switches.			
Personnel use power tools with guards in place.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			
Electrical – General	Yes	No	Not Observed
Personnel use portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in their insulation and are protect them from damage.			
Portable extension cords in use that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			
Fall Protection – General	Yes	No	Not Observed
When exposed to falls of >6' and no standard guardrails or safety nets are installed, personnel use a personal fall arrest system.			
Ladders & Scaffolds – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or other approved access for scaffolds.			
Personnel using stepladders have spreaders locked and use the top two steps only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			
Welding, Cutting & Brazing	Yes	No	Not Observed
Personnel employ firewatches during each operation.			
Personnel obtain permits for each operation.			
Personnel use rated eye protection for flash burn.			
Personnel remove or cover combustibles.			



ROOFING SAFETY EMPHASIS POINTS

DATE: _____ AUDITOR: _____

SUB: _____

Roofing Trade	Yes	No	Not Observed
Personnel working on a low-sloped roof, if not protected by guardrails, safety nets or personal fall arrest systems, are protected by a warning line and safety monitoring system.			
Personnel serving as safety monitors on a low-sloped roof have no other job duties and continuously observe other workers for potential activities that could result in a fall.			
Personnel cover and mark holes in a roof or protect them with standard guardrails and toeboards.			
When lifting equipment and materials, personnel lift with their legs and keep the load close to the body.			
Electrical – General	Yes	No	Not Observed
Personnel use portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in their insulation and are protect them from damage.			
Personnel use portable extension cords that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			



IRON WORKER/MILLWRIGHT SAFETY EMPHASIS POINTS

Date: _____ Auditor: _____ Sub: _____

Iron Worker & Millwright Trades	Yes	No	Not Observed
Personnel working in steel erection at heights over 6' use personal fall arrest systems.			
Rigging and other personnel walk around suspended loads.			
Personnel use tag lines are used on all loads			
Personnel secure solid web structural members with at least two bolts before they are released			
Personnel secure containers, bolts and pins are against displacement when aloft.			
Personnel use safety wires on pneumatic tools used aloft.			
Electrical – General	Yes	No	Not Observed
Personnel use portable electrical tools and appliances with a ground fault circuit interrupter.			
Personnel use portable extension cords with no breaks in their insulation and are protect them from damage.			
Portable extension cords in use that are approved for construction (types SO, ST, STO, SJ, SJT, SJO, or SJTO).			
PPE – General	Yes	No	Not Observed
Personnel wear hardhats in construction areas.			
Personnel wear safety glasses with sideshields in construction areas.			
Ladders & Scaffolds – General	Yes	No	Not Observed
Personnel set ladders on secure footing and tie them off at the top.			
Personnel place ladders such that they are equally supported on each rail and set at a 4:1 minimum pitch.			
Personnel use scaffolds only when complete with guardrails and toeboards.			
Personnel use correct ladders to access scaffolds.			
Personnel maintain three point contact when climbing ladders or scaffolds.			
Personnel using stepladders have spreaders locked and use the top step only for balancing/bracing.			
Personnel using ladders are facing the ladder at all times.			
Welding & Cutting	Yes	No	Not Observed
Personnel employ firewatches during each operation.			
Personnel obtain permits for each operation.			
Personnel use rated eye protection for flash burn.			
Personnel remove or cover combustibles.			



Personnel have a fire extinguisher on hand during operations.			
Cranes	Yes	No	Not Observed
Personnel use approved hand signals during lifts.			
Personnel maintain minimum distances from live power lines.			
Personnel use an observer when the operator can't see power lines.			
Personnel barricade the swing radius of the crane.			



WELDING AND BURNING PERMIT

APPENDIX A

(Work is not permitted unless this card is filled and posted in work area.)

DATE ____/____/____ TIME _____ AM ___ PM ___

BUILDING _____

DEPT. _____ FLOOR _____

WORK TO BE DONE _____

SPECIAL PRECAUTIONS _____

FIREWATCH REQUIRED? _____

The location where work is to be done has been examined by me, the necessary precautions taken (see back of permit) and permission is granted for this work.

PERMIT EXPIRES ____/____/____ TIME _____ AM ___ PM ___

SIGNED _____

INDIVIDUAL RESPONSIBLE FOR WORK AUTHORIZATION

TIME STARTED _____ COMPLETED _____

FINAL CHECK
(where fire watch is required)

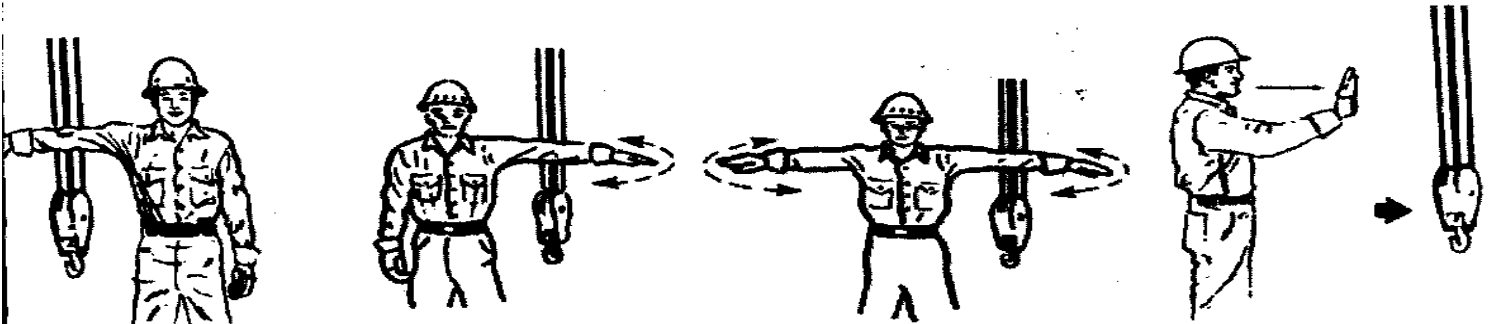
Work area and all adjacent areas where sparks might have spread were inspected for at least 30 minutes after the work was completed and no fire conditions were noted.

SIGNED _____

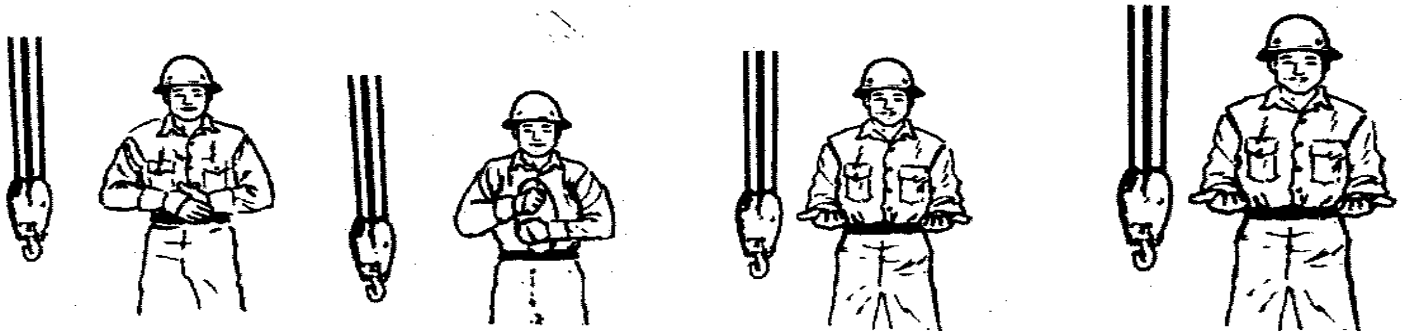
After work is completed, return this permit to The Project Safety Coordinator for filing and review by insurance representative.

CRANE SIGNALS

APPENDIX B



<p>SWING. Arm extended, point with finger in direction of swing boom.</p>	<p>STOP. Arm extended, palm down, move arm horizontally.</p>	<p>EMERGENCY STOP. Both arms extended, palms down, move arms back and forth horizontally.</p>	<p>TRAVEL. Arm extended forward, hand open and slightly raised, make pushing motion in direction of travel.</p>
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<p>DOG EVERYTHING. Clasp hands in front of body.</p>	<p>TRAVEL (Both Tracks). Use both fists in front of body, making a circular motion about each other, indicating direction of travel, forward or backward. <i>(for land cranes only)</i></p>	<p>TRAVEL (One Track). Lock the track on side indicated by raised fist. Travel opposite track in direction indicated by circular motion of other fist, rotated vertically in front of body.</p>	<p>EXTEND BOOM (Telecoping Booms). Both fists in front of body with thumbs pointing outward.</p>
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APPENDIX B – CRANE SIGNALS

<p>RETRACT BOOM (Telescoping Boom) Both fists in front of body with thumbs pointing toward each other.</p>	<p>HOIST. With forearm vertical, and forefinger pointing up, move hand in small horizontal circle.</p>	<p>TRAVEL (One Track). With arm extended downward, forefinger pointing down, move hand in a small horizontal circle.</p>	<p>BRIDGE TRAVEL. Arm extended forward, hand open, and slightly raised, making pushing motion in direction of travel.</p>

<p>RETRACT BOOM (Telescoping Boom) Both fists in front of body with thumbs pointing toward each other.</p>	<p>HOIST. With forearm vertical, and forefinger pointing up, move hand in small horizontal circle.</p>	<p>TRAVEL (One Track). With arm extended downward, forefinger pointing down, move hand in a small horizontal circle.</p>	<p>BRIDGE TRAVEL. Arm extended forward, hand open, and slightly raised, making pushing motion in direction of travel.</p>



CONFINED SPACE ENTRY PERMIT

Date and Time Issued: _____
 Date and Time Expires: Job site/Space I.D.: _____
 Job Supervisor: _____
 Equipment to be worked on: _____
 Work to be performed: _____
 Stand-by personnel: _____

1. Atmospheric Checks:				
Time:	Oxygen:	%		
Explosive:	% L.F.L	Toxic:	PPM	
2. Tester's signature:				
3. Source isolation (No Entry):		N/A	Yes	No
<i>Pumps or lines blinded</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>disconnected, or blocked</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Ventilation Modification:		N/A	Yes	No
<i>Mechanical</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Natural ventilation only</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Atmospheric check after isolation and ventilation:				
Oxygen:	%	>	19.5	%
Explosive:	% L.F.L	<	10	%
Toxic	PM	<	10	PPM H (2) S
Time:				
Testers signature:				
6. Communication procedures:				
7. Rescue procedures:				
8. Entry, standby, and back up persons:		Yes	No	
Successfully completed required training?		<input type="checkbox"/>	<input type="checkbox"/>	
Is it current?		<input type="checkbox"/>	<input type="checkbox"/>	
9. Equipment:		N/A	Yes	No
Direct reading gas monitor - tested		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety harnesses and lifelines for entry and standby persons		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hoisting equipment		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Powered communications		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SCBA's for entry and standby persons		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protective Clothing		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All electric equipment listed		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Class I, Division I, Group D and Non-sparking tools		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Periodic atmospheric tests:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Oxygen:	%	Time:	Oxygen:	%	Time:
Oxygen:	%	Time:	Oxygen:	%	Time:
Explosive:	%	Time:	Explosive:	%	Time:
Explosive:	%	Time:	Explosive:	%	Time:
Toxic:	%	Time:	Toxic:	%	Time:
Toxic:	%	Time:	Toxic:	%	Time:

We have reviewed the work authorized by this permit and the information contained here-in. Written instructions and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "No" column. This permit is not valid unless all appropriate items are completed.

Permit Prepared By: (Supervisor) _____

Approved By: (Unit Supervisor) _____

Reviewed By (Cs Operations Personnel):

 (printed name) (signature)

This permit to be kept at job site. Return job site copy to Safety Office following job completion.

Copies: White Original (Safety Office), Yellow (Unit Supervisor), Hard(Job site)

Appendix D - 2

CONSTRUCTION ELECTRICAL INSPECTION

Company Name: _____
 Job site Address: _____
 Superintendent: _____
 Inspector(s): _____
 Date/Time: _____

Yes	No	NA	Corr Date	Area Inspected
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Electrical devices have current inspection and coding?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Electrical equipment properly maintained?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Equipment properly grounded?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Assured equipment grounding program established?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		GFCI used and tested where required?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Fuses provided?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Electrical dangers posted?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Proper fire extinguisher(s) provided?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Are terminal boxes equipped with required covers (cover used)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Are circuits labeled in terminal boxes?

Note: This general construction safety inspection checklist is not designed to supersede existing safety inspection checklists, rather it should be used only as a general guideline. You are encouraged to customize this general guideline to accommodate your specific operations.



HOT ELECTRICAL WORK PERMIT

List Service/Maintenance Electrician (s) performing Hot Electrical Work:	Supervisor Requesting Hot Electrical Work:	
Project: Yes _____ No _____	Service: Yes _____ No _____	
Customer is aware of Hot Electrical Work Being performed:	(Requires only a Journeyman Electrician to Complete Hot Electrical Work)	
Job Name and Number:	Signature of Person Completing Form:	
Hot Electrical Work is being performed on :		
Date: _____ Time: _____		
1. Description of Work: Explain work to be performed (e.g. trouble shooting 120-208, Pulling wire into panel, etc.):		
2. Safety Considerations and Personal Protective Equipment (PPE) Required		
(Check all that apply) Check Type of PPE REQUIRED and Used	(Check all that apply) Check Type of PPE REQUIRED and Used	
<input type="checkbox"/> Hot Work Gloves	<input type="checkbox"/> Barriers and Guards are in workable condition and are properly placed.	
<input type="checkbox"/> Face Shields	<input type="checkbox"/> Hot Work Tools. (Insulated Tools Required.)	
<input type="checkbox"/> Blankets	<input type="checkbox"/> Meters are in operational condition and have been tested.	
<input type="checkbox"/> Safety Glasses	<input type="checkbox"/> Other employees in the area have been informed of the Hot Electrical Work being performed.	
<input type="checkbox"/> Signage or Barricading	<input type="checkbox"/> All employees assigned to perform work assist have been briefed	
<input type="checkbox"/> Lockout/Tagout Equipment placed on all other circuits	<input type="checkbox"/> Other Considerations (Explain on back of form, if applicable)	
<input type="checkbox"/> Hearing Protection <input type="checkbox"/> Flash Suit	Flame Resistant: <input type="checkbox"/> Long Sleeve Shirt <input type="checkbox"/> Long Pants	
<input type="checkbox"/> Cotton Underwear <input type="checkbox"/> Cotton Shirt	<input type="checkbox"/> Coverall <input type="checkbox"/> Flash Suit <input type="checkbox"/> Flash Hood	
3. Note: Refer to the matrix to determine if a second person is required.)	Authorization & Approval (All involved parties must sign below)	
Printed Name:	Signature:	Date
<i>Service/Maintenance Technician Signature:</i>	FORM IS NOT VALID FOR MORE THAN 30 DAYS FROM THE DATE APPROVED.	

ENERGIZED ELECTRICAL MATRIX

Energized Electrical Safety Matrix								
This matrix specifically apply to any employee working within 4 feet of energized devices								
Situation	Hard Hat	Safety Glasses	Insulated Gloves	Arc Shield 8 cal/cm ²	FR Clothing 8 cal/cm ²	Insulated Tools	2nd Person	Hot Work Request
Working on 120v Device (Outlet, Switch)	X	X	X			X		(*)X
Working on 227v Device	X	X	X			X		(#)(*)X
Working on 208v Device	X	X	X			X		(#)(*)X
Working 208v Disconnect less than 60 amps	X	X	X			X		(#)(*)X
Working 208v Disconnect 60 amps or more	X	X	X	X		X	X	(#)(*)X
Working on 480v Disconnect	X	X	X	X	X	X	X	(*)X
Working on 208v Panel less than 60 amps	X	X	X			X		(#)(*)X
Working on 208v Panel 60 amps or more	X	X	X	X		X	X	(#)(*)X
Working on 480v Panel	X	X	X	X	X	X	X	(#)(*)X
Testing 120v Circuitry	X	X	X			X		(*)X
Testing 277v Circuitry	X	X	X			X		(*)X
Testing 208v Panel	X	X	X			X		(*)X
Testing 480v Panel	X	X	X			X		(*)X
All Transformers	X	X	X	X	X	X	X	X
All Switchgear	X	X	X	X	X	X	X	X
Removing Panel Covers with Deadfront	X	X						(*)X
Control Equipment 120v	X	X	X			X		(*)X
Control Equipment 208v less than 60 amps	X	X	X			X		X
Control Equipment 208v 60 amps or more	X	X	X	X		X	X	X
Control Equipment 277v	X	X	X	X		X	X	X
Control Equipment 480v	X	X	X	X	X	X	X	X
Motor Control Centers/240v or greater	X	X	X	X	X	X	X	X
Motor Control Centers/Less than 240v	X	X	X	X		X	X	X
120v Light Fixture	X	X	X			X		X
227v Light Fixture	X	X	X			X		X
208v Light Fixture	X	X	X			X		X
480v Light Fixture	X	X	X			X		X
Working on 120v J-boxes	X	X	X			X		X
Working on 208v J-boxes	X	X	X			X		X
Working on 227v J-boxes	X	X	X			X		X
Working on 480v J-boxes	X	X	X	X		X	X	X

Note: Any suspect equipment that is being worked on must be treated with the utmost caution and all protective equipment must be worn. These are minimum requirements.

(*) Along form should be completed and signed for all troubleshooting on a construction project. The form must be prepared explaining how the troubleshooting will be conducted, what tools and personal equipment will be required.

(#) Authorized personnel may be use the short form if the work is urgent and not deemed to be too invasive and the work is approved by the Company Management



CONSTRUCTION LADDERS & SCAFFOLDS INSPECTION

Jobsite Address: _____

Company Name: _____

Superintendent: _____

Date/Time: _____

Inspector(s): _____

Yes	No	NA	Corr Date	Area Inspected
				<p>Ladders</p> <ol style="list-style-type: none"> 1. Ladders inspected and in good condition? 2. Ladders used properly for type of exposure? 3. Ladders secured to prevent slipping, sliding, or falling? 4. Do siderails extend 36" above top of landing? 5. Are ladders spliced? 6. Rungs or cleats not over 12" on center? 7. Proper maintenance and storage? 8. Are ladders painted? 9. Do ladders in excess of 20 feet have fall protection? 10. Are aluminum ladders of sufficient strength for the task? <p>Scaffolds</p> <ol style="list-style-type: none"> 1. Erection properly supervised? 2. All structural members free from defects and meet safety factor? 3. Are all connections secure? 4. Are scaffolds erected on solid footing? 5. Is scaffold tied to structure? 6. Are working areas free of debris, snow, ice, grease, etc.? 7. Are workers protected from falling objects? 8. Is scaffold plumb and square, with cross-bracing? 9. Are guard rails, intermediate rails, and toeboards in place? 10. Are ropes and cables in good condition? 11. Fall protection available and in use?



CONSTRUCTION EXCAVATION & SHORING INSPECTION

Company Name: _____ Jobsite Address: _____

Superintendent: _____ Date/Time: _____

Inspector(s): _____

Yes	No	NA	Corr Date	Area Inspected
				<ol style="list-style-type: none">1. Are holes, trenches, and cuts over 5 feet deep shored, sloped or trench boxes used?2. Operation supervised by competent person?3. Spoil banks at least 2 feet from edges of cut?4. Ladders placed to ensure no greater than 25 feet of lateral travel by worker?5. Ladder properly secured?6. Are adjacent structures properly shored?7. Is shoring and sheathing correct for soil and depth?8. Are roads and sidewalks supported and protected?9. Evacuation barricaded and lighting provided?10. Are equipment ramps adequate?11. Have underground utility installations been identified?12. Registered professional engineer design/approval accomplished?13. Confined space permit required plan established? <p>Tunneling</p> <ol style="list-style-type: none">1. Testing of atmosphere accomplished?2. Adequate ventilation?3. Electrical approved for hazardous locations?4. Adequate fire prevention?5. Rescue plan?6. Confined space entry permit program?