BROADDUS
CONSTRUCTION

Health and Safety Plan

BROADDUS CONSTRUCTION

Contents

Appendix A: Supplemental Attachments

Disclaimer-Everything in this document is intended to be in accord with all statutory rules and regulations that exist at the time of the publication of this manual. The authors are not liable for any charges that may be enacted after this date and cannot be held liable for the use or misuse of this document. Readers are cautioned to familiarize themselves with the language of all statutory rules and regulations that govern the subjects identified within this document.

BROADDUS CONSTRUCTION

Section 1 Safety and Responsibilities

Introduction

It is the philosophy of Broaddus Construction that all injuries can be prevented. We are vitally concerned about the human suffering and financial losses resulting from on-the-job accidents, both for the individual and the company. Therefore, the prevention of accidents is a major company objective, requiring the active and sincere cooperation of all employees.

Total accident prevention can only be accomplished through the coordinated efforts of all employees. Therefore, all Broaddus Construction personnel, as a condition of employment, must be knowledgeable of and follow the company safety requirements.

It is our policy that no job or service performed by an employee is so important or urgent that it cannot be performed in the safest way. Safety and sanitary conditions will be taught and enforced by supervision. It is our firm commitment to truly make safety equal to cost and production.

We welcome suggestions from employees that will further help provide safe and healthy conditions and practices.

Chris Davis
President

Management Leadership

We believe that people are our greatest asset. The prevention of incapacity, loss of earning power, physical disruption of the project, the reduction of construction and insurance costs are but a few of the many benefits made possible by a comprehensive safety program. A safe job is a good job.

Our Safety Policy starts with our individual employees. We recognize it is our responsibility to create a safe work environment for them. The best way to achieve this is to make sure our employees know how to do their job safely. Safety does not start at the top and filter down. Safety starts with individual working men and women who know how to do their work safely. Our employees will attend safety meetings and we will create a job site where the importance of safety is communicated to our employees and all persons on the job site.

BROADDUS believes that a safe operation is necessary for an efficient operation. Safety and production go hand in hand. We will select employees who are willing to perform their jobs with due regard to safety, safety rules, safe practices, and accident prevention.

Subcontractor Responsibilities

It is our practice to delegate work to specialty subcontractors who are knowledgeable about the special safety considerations of their respective trades. Each subcontractor agrees that BROADDUS has retained the subcontractor for reasons which include, but are not limited to, subcontractor's expertise with regard to safety and health hazards associated with the work to be performed, by the subcontractor. Again, we do not control the individual employees of our subcontractors. It is our intention that each specialty subcontractor (employer) is directly responsible for monitoring their employee's compliance with the applicable established safety standards. Each subcontractor agrees that it has and will have primary responsibility for the safety, health and welfare of its employees, subcontractors, and agents performing work at the construction site.

At all times, while performing work on the construction site, the subcontractor, its employees, subcontractors, and vendors will comply with all applicable safety, health and environmental procedures, policies, and guidelines.

We require that subcontractors provide and maintain a copy of their written safety and hazard communication program on-site. Subcontractors are required to follow and comply with this safety program. At all times the most stringent rule will apply. BROADDUS reserves the right to implement additional safety requirements when necessary for the safety and wellbeing of employees, workers and the public. We will monitor the general safety conditions of the premises. Where these conditions affect or concern the work of our subcontractors, their management will be notified. The subcontractors have the authority and responsibility to control, and/or correct all hazards associated with the work to be performed by the subcontractor. If the subcontractor becomes aware of a hazard which the subcontractor believes was created or caused by another subcontractor, the subcontractor must notify

BROADDUS immediately. If the subcontractor fails to do so, the subcontractor agrees to assume all responsibility to control and/or correct the hazard.

The subcontractors will provide only properly trained and qualified persons to perform work at the construction site. The subcontractor has the responsibility to train their employees about safe work practices and work-specific hazards.

Public Safety

All necessary precautions shall be taken to prevent injury to the public or damage to property of others. Precautions to be taken could include, but are not limited to, the following:

- Work shall not be performed in any area occupied by the public unless specifically permitted by the contract or in writing by Broaddus.
- When it is necessary to maintain public use of work areas involving sidewalks, entrances to buildings, lobbies, corridors, aisles, stairways, and vehicular roadways, the Company shall protect the public with appropriate guardrails, barricades, temporary fences, overhead protection, temporary partitions, shields, and adequate visibility.
- Sidewalks, entrances to buildings, lobbies, corridors, aisles, doors, or exits shall be kept clear of obstructions to permit safe entrance and exit of the public at all times.
- Appropriate warnings and instructional safety signs shall be conspicuously posted where necessary. In addition, a signalman may be necessary to control the movement of motorized equipment in areas where the public might be endangered.
- Sidewalk sheds, canopies, catch platforms and appropriate fences shall be provided when it is necessary to maintain public pedestrian traffic adjacent to the erection, demolition, or structural alteration of outside walls on any structure. The protection required shall be in accordance with the laws and regulations of the locality.
- A temporary fence may be provided around the perimeter of aboveground operations adjacent to public areas.
- Barricades shall be provided where sidewalk shed, fences, or guardrails are not required between work areas and pedestrian walkways, roadways, or occupied buildings. Barricades shall be secured against accidental displacement and shall be maintained in place except where temporary removal is necessary to perform work. During the period a barricade is temporarily removed, for the purpose of work, a watchman shall be placed at all openings.
- Temporary sidewalks shall be provided when a permanent sidewalk is obstructed by the Contractor's operations.

Safety Submittals

All documentation, information and correspondence required by the Safety Manual are to be transmitted to or from the Project Manager, Superintendent or Safety Director.

Site Specific Emergency Action Plan: Each project must complete a Site Specific Safety Plan (SSSP) prior to the start of construction activities. The Plan identifies site specific safety standards, emergency action plan and assignments, critical issues and outlines additional safety requirements, and items that may not be addressed in this plan.

Subcontractor Pre-Start Meeting: Prior to mobilizing each subcontractor's project manager, superintendent and foremen should attend a pre-start meeting. During this meeting the Subcontractor Safety Plan will be reviewed, and additional safety expectations or requirements will be explained.

Safety Plan Review: Prior to mobilization and prior to the start of any construction activity, subcontractors performing certain activities may be required to submit a safety plan for their scope of work. These activities include, but are not limited to, trenching, excavation, pier drilling, roofing, fall protection, controlled access zone, steel erection, pre-cast erection, demolition, Electrical/Utility Shutdown. The subcontractor's site-specific safety plan should include an overview of what steps will be taken to manage the hazards associated with their scope of work. The plan must also identify competent persons or specific needs.

Safety Information and Updates: All subcontractors will conduct a weekly toolbox safety meeting. Topics should vary from week to week and shall cover those areas of greatest concern to the immediate tasks or project. Should a subcontractor's task place others in danger, safety precautions should be shared with all other affected trades. Attendance should be documented and made available to Broaddus upon request.

Communication

Communication is critical on any construction site and has a direct effect on the ability to maintain a safe workplace. Employees in non-supervisory rolls are prohibited from using cellular phones, iPod (or other music radios) or other communication devices except while on break or during lunch. Employees/workers assigned two-way radios for jobsite communications are allowed. The use of cellular phones, radios or similar devices while working with tools, equipment or material is strictly prohibited. The use of earphones while working is strictly prohibited. Using any of these prohibited items, while working, will be grounds for immediate disciplinary action.

Responsibilities

Employee Responsibility includes:

a. Work in a safe and efficient manner and follow established safety regulations and company policies pertaining to PPE or other personal requirements.
b. Ensure that each task given is understood.
c. Be alert and free of injuries to the extent possible while working on any Company project.
d. Report any unsafe conditions to a supervisor as soon as possible.
e. Report even minor injuries to a supervisor in person and seek first aid care immediately.
f. Report to work physically and mentally able to perform the tasks assigned.
g. Report to work without the presence of drugs or alcohol in his system which may affect work performance.
h. Report to the Supervisor any prescription or nonprescription drugs taken which would affect the ability to work safely.
i. Not to perform work which the employee feels is unsafe; this is true even if the supervisor asks for such work. No employee will be reprimanded for reporting to the supervisor's supervisor a request to work in what the employee believes is an unsafe condition. Every employee may seek out the supervisor's supervisor to report any unsafe condition.

Superintendents and Assistant Superintendents

a. Hold a Pre-start meeting with all subcontractors and review subcontractor safety submittals.
b. Attend safety meetings
c. Plan ahead for safety requirements and communicate those requirements to all foremen.
d. Review the safety program and insure its implementation on the project.
e. Review serious accidents to see that accident causes are being investigated and the proper corrective actions are taken.
f. Assure that all proper safety precautions are being taken before new operations are started, or when new tools, equipment, and materials are introduced to the project.
g. Give leadership and direction in the administration of safety activities.
h. Give fair consideration to recommendations, interpret policies and support them as an example to those in supervisory levels.
i. Assist in accident investigations.
j. Require all Supervisors to comply with all reasonable safety recommendations.
k. Discuss all safety violations with subcontractor's foremen in the weekly progress meetings, document same and require compliance.
l. Inspect the project for safe and unsafe activity
m. Provide full support of all safety activities and safety procedures.
n. Take prompt corrective action whenever unsafe conditions or unsafe acts are noted.

Project Managers and Assistant Project Mangers

a. Require all subcontractors to submit safety submittals and forward to the project team prior to pre-start meeting. Review the safety program and insure its application on the project.
b. Meet with Superintendent and other project team members to develop Site Specific Safety Plan.
c. Provide electronic copies of the safety manual and Site-Specific Safety Plan during pre-bid instructions.
d. Review accident summary reports in order to keep informed on the project accident record.
e. Assist in appropriate preventive action when accident trends are unfavorable.
f. Give leadership and direction in the administration of safety activities.
g. Give fair consideration to recommendations and interpretation of policies and support them as an example to those in supervisory levels.

Senior Management

a. Assist in administrating the safety programs on all projects.
b. Provide information, material, and guidance for each new project at project start up.
c. Monitor all injuries and accidents. Ensure that serious injuries are investigated and share lessons learned with other sites.
d. Provide positive reinforcement for the safety program to employees. Encourage employee participation in various aspects of the safety program. Involve middle and top management whenever possible as well as outside speakers.
e. Promote incentive safety programs.
f. Keep all projects up to date on the latest safety trends and requirements. Pass on good safety ideas from project to project. Provide basic safety training resources for field supervision.
g. Keep apprised of all serious injuries, special inspections and any major problem areas or ideas that could impact the projects and BROADDUS.
h. Interface with client/owner to review and resolve safety concerns on the project.

Corporate Safety Department

a. Coordinate the development and administration of the safety program.
b. Assist operating personnel by preparing safety material, literature and other training materials, and maintaining a clearing house for material on safety standards, general safety regulations, Occupational Safety and Health Administration and other Federal and State laws and regulations that may be applicable.
c. Accumulate and analyze accident data to develop corrective and preventive action.
d. Provide periodic reports relating to the effectiveness of the program and accident and injury trends.

e. Assist in establishing safety goals.
f. Resolve questions, approve and/or recommend necessary expenditures to correct unsafe conditions.
g. Make regular job site visits to determine if safe work practices are being observed, and that unsafe conditions do not exist.
h. Review Site Specific Safety Plans and Safety Submittals.
i. Inspect the project for safe and unsafe activity.

Project Safety Staffing

Subcontractors

If the total number of employees/workers onsite (including all tiered subcontractors) is Twenty-Four (24) employees/workers or less, a supervisor may be designated as the Site Safety Representative (SSR) for the project and assume the responsibilities with that position.

Designated SSR should have:

- Successful completion of OSHA 10-hour training with in the last four (4) years
- First-aid / CPR certified
- Designated as a competent person

If the total number of employees/workers onsite (including all tiered subcontractors) is between **25 to 49** a designated full-time Site Safety Representative with a minimum of an OSHA 30 hr course may be required to be onsite at all times.

Full-time SSR must have:

- Completion of OSHA 30-hour training with in the last four (4) years.
- Be assigned no other responsibilities other than safety supervision (non-production).

If the subcontractor has **50** or more personnel onsite (including all tiered subcontractors) a designated full-time Site Safety Professional (SSP) must be onsite at all times.

Site Safety Professional should have:

- Two (2) years of safety experience as a safety manager or,
- Completion of OSHA 30-hour training and,
- Be assigned no other responsibilities other than safety supervision (non-production).
- And, is subject to approval of the BROADDUS Project Manager, Superintendent and Safety Director before being assigned to any BROADDUS project.

BROADDUS reserves the right to require a subcontractor to provide a full-time on-site safety representative (regardless of crew size) based on scope of work, safety compliance, frequency of incidents or any other reason determined by the Project Manager, Superintendent or

Safety Director. Including but not limited to special single day activities such as concrete pours, shutdowns, manpower increase of any kind for any length of time.

Restriction of Activities

BROADDUS may designate areas within the construction site with limited or restricted activity or access. Projects may designate areas for employees to eat lunch, take breaks, use tobacco, etc. Typically, food and drinks (other than water or products, such as Gatorade) are not allowed in the work areas of the construction site. Each subcontractor is responsible for maintaining its designated area in a clean and sanitary condition including the daily removal of trash and other debris.
Employees who fail to use the designated areas for food, drinks and tobacco use or who do not pick up and dispose of their trash will be subject to disciplinary actions as described in section 3 of this manual.

Accident Investigation

BROADDUS must have an effective system to accurately document, analyze for cause, report, and record data on job-related injuries, illnesses, and incidents. The primary reasons for this documentation are:

a. It allows for improvements in the safety and health program, which in turn reduces the frequency and severity of occupational injuries, illnesses, and incidents.
b. It allows corrective actions to be taken to remove the cause and eliminate further incidents, thus making every project a safer place to work.
c. It reduces the costs of workers' compensation and public liability insurance, property damage, and ultimately results in increased production.
d. It provides safety and health research data that can be used to develop programs to control or eliminate specific safety and health hazards and improve work methods.
e. It gives management the tools it needs to effectively educate employees in injury, illness, and incident prevention.
f. It provides data that is needed to prepare reports required by a client, international, federal, state, and/or local regulations.

1. Root Cause Analysis The project team will complete a Root Cause Analysis of incidents that are classified as injury, property damage or near-miss. First aid incidents may require a Root cause if requested by the safety department.

2. Project Incident Review
The safety department will coordinate a project incident review. The review will include a summary of the incident, review of the root cause and corrective actions.

a. The project incident review will be conducted 4-5 day, when possible, after the incident.
b. The project incident review includes the project team, safety director, Senior management and subcontractor involved.

All injuries must be reported to project manager or superintendent immediately. Accidents that do not result in injury or property damage are considered near-misses and should be reported as well.

Near-miss: unplanned incidents that did not result in injury or property damage.

- Notification of Incident
- Root Cause Report.
- Record the incident in safety software for the specific project

Injury, First-Aid or Medical Treatment: Any injury that requires treatment including First-Aid. Complete the following forms.

- Notification of Incident
- Treatment Refusal, if applicable
- State specific W/C "First Report of Injury"
- Root Cause Report.
- Record the incident in safety software for the specific project

BROADDUS CONSTRUCTION

Section 2 Procedures

Project Orientation

All Employees/Workers who enter the construction site (other than the project trailers or parking area) are required to receive an orientation prior to beginning work on a BROADDUS project. Items to be covered include but are not limited to; Site specific hazards, Safety expectations, Site/owner requirements, parking, site hours, Emergency response, Housekeeping, SDS locations, BROADDUS Rules and Regulations Orientations, should be given by the subcontractor supervisor.

Additional Requirements:

Some projects may require pre-work or pre-access drug screening. When drug screens are required, they must be completed before the orientation. Each subcontractor is responsible for scheduling employee drug screens and all costs associated with drug screening. Some projects or owners may require additional site specific videos or training. Each subcontractor is responsible for retaining proof of employee training.

Training Verification

Each subcontractor is responsible for providing safety training for its employees. Safety training includes both general awareness and user specific training. Training should include the use of all tools, equipment and motorized vehicles for tasks assigned to employees. Training documentation may be requested at any time by Broaddus management.

Disciplinary Program

BROADDUS reserves the right to use any disciplinary actions, depending upon the seriousness of the violation. It is not required to complete all steps of the disciplinary procedure in every case. Discipline may begin at any step appropriate to the situation. Discipline includes, but is not limited to:

- Minor - Verbal Reprimand
- Significant - Written Reprimand or Suspension
- Serious - Suspension or Termination
- Flagrant -Termination of Employment (or permanent removal from the project site) Fighting on job site or company property. Theft of any item on project or company property. Reporting to work under the influence of alcohol or illegal drugs, possession, sale or use of illegal drugs, or consumption of alcohol while working on job sites, or company vehicles. Gross negligence or willful acts in the performance of duties resulting in damage to company property or injury to others. Willfully misusing company property. Serious safety violation resulting in injury.

Governmental Inspections

Workplace inspections may be made by one or more of the governmental agencies listed below:

- Occupational Safety and Health Administration (OSHA).
- Mine Safety and Health Administration (MSHA).
- Texas Workers' Compensation Commission.

When a representative of any of the above listed agencies appears at your workplace, you should follow the guidelines set out below as close as possible. OSHA and MSHA have established hard and fast rules for their compliance officers, their procedures will be used as a basis for our company response.

If you are a Supervisor and the compliance officer contacts you, get in contract with the Safety Director or Company President. Let them handle the matter. If they are not available, then follow the instructions set out below.

If you are a Project Supervisor, you should follow the procedure outlined below:

- Greet the Compliance Officer cordially.
- The compliance officer, should, at this time present credentials of identification and tell you the nature of his business. Should the compliance officer fail to present proper credentials of identification, he is in violation of Federal Regulations and we might have grounds to have any citation issued set aside.
- The compliance officer will advise you of the reason for his inspection. One of the three reasons should normally be given:

– Scheduled Inspection.
– Complaint (Referral).
– Accident.

Or, they could be making a follow-up inspection to check out abatement if the job has been previously cited.

- Immediately after identification and statement of purpose of the visit by the compliance officer, the Supervisor should ask the officer to wait a few minutes while you call the Main Office.
- You should then call the Safety Director at the Main Office and advise him/her of who the compliance officer is and why the job is being inspected. The Safety Director will want to know the name of the officers and why the inspection is being conducted.

  If the Safety Director is in, he/she will review key points with you in cases where it is possible, will come to the work site and assist you during the inspection. In the event he/she is out, contact your Division Manager or Resource Manager for assistance.
- Accompany the compliance officer on the walk around. Remember, you are the company spokesperson, so watch what you say.

- Under OSHA, MSHA, and State Plans, the compliance officer has the right during the inspection to interview in private any employee. You can inform the employee of his rights concerning making statements to the officer.
- During the inspection, listen to the officer's comments and/or criticisms and take detailed notes. You should take photographs of the same things the compliance officer takes.
- If violations of the OSHA and MSHA standards are cited and they can be corrected, then correct them immediately.
  In some cases, they will insist that correction be made immediately. A spirit of cooperation should be exhibited at all times, but you should document by photo or witness any situation that you feel is correct prior to making any changes. If measurements are needed be sure to take them. Be sure to advise the Safety Director of this, as we may want to include it in our defense if a citation is issued.
- Feel free to discuss the alleged violation with the compliance officer, but do not argue with him regardless of how unreasonable the alleged violation may seem. Remember to take good notes.
- you have the right to call the Main Office and consult top management any time during the inspection. Always keep your Safety Director informed.
- The inspection will end with a closing conference at which time the compliance officer will go over the alleged violations and advise you of what citations will be issued, if any.
- Immediately after the compliance officer leaves the work site, another call should be made to the Company Official advising what violations were discussed. It may be necessary that some detail documentation be done at this time to assist in the determination of whether a contest of the citation will be required.

  Remember, if you keep your workplace well policed and free of hazards, no citation will be issued. Should a citation be issued, we need all the facts in order to determine where we need to improve our Safety Program.

Accident/Illness Records

Record keeping requirements for the job site are an indispensable part of the Company Safety Program and documents will be maintained as follows (Copies of some required forms are in the Attachment Section of this manual):

- Employee's First Report Form (TWCC-1) Note: The TWCC-1 is for use in Texas only.
  After any recordable injury on the job, the Superintendent will notify the Main Office of the injury so that a 1st Report of Injury form can be filled out.
- OSHA Form 300
  The OSHA Form 300 for Recordable Injuries and Illnesses must be kept up-to-date and on file in the Main Office. The summary portion of the OSHA Form 300 will be completed and maintained at the Company Main Office by the designated personnel, and it must be posted on the job site bulletin board during February 1 through April 30 of each year. It should then be placed in the job records.

Procedure

- Accidents should be reported to the Project Superintendent and Safety Director immediately by the injured employee or, if this person is unable to report, by any employee witnessing the accident or the results of the accident.
- If immediate medical attention is required, that should be taken care of first. If immediate care is not required, the Superintendent/Foreman should immediately obtain all pertinent information and fill out the Employee's First Report of Injury form while it is still fresh on his/her own mind and that any of the witnesses or the injured person.
- In addition to filling out the injury report, the Supervisor will promptly telephone the Company Main Office and report the accident, in order that any approvals needed for medical attention can be expedited. The accident report must be sent to the Main Office by the end of the next workday.
- The Occupational Safety and Health Act states that each employer shall maintain a log of recordable occupational injuries and illnesses (OSHA Form 300). This means that the Superintendent must record the name and pertinent details for any employee (or visitor) who receives medical treatment, suffers loss of consciousness, or is restricted in work or motion due to an injury.
- At the beginning of each job, and at the beginning of each year, these forms are dispensed to all projects. This log must be maintained on the job and posed on the bulletin boards as required. The log must be available for review during any OSHA Inspection. Assistance can be obtained from the Company Main Office in the proper procedure for maintaining this record.
- A doctor's release is required to be on file before the injured employee can return to work. Should an employee be put back to work without a doctor's authorization, the Company will be in violation of State Law.

Return to Work

It is a fact that an injured employee will generally recover faster when allowed to return to work in a limited capacity rather than being sent home during recovery from minor injuries. It is Broaddus policy where feasible to return injured workers to productive work, although not necessarily to their preinjury duties, as early as possible during their recovery. This type of work is often referred to as "modified duty" or "light duty" work. Broaddus has adopted this policy because employees who remain off work for long periods of time not only affect the company's productivity and worker compensation costs, but they also often experience slow healing and a loss of self-esteem. Within the requirements of their treating medical providers, the limitations of law, and the economic and physical limitations of our own properties, the company will make every effort to provide meaningful work. It is expected that all Subcontractors working on our project will follow the same policy and offer modified/light duty to any employee involved in a workplace accident.

Hazardous Communication Program (HCP)

A copy of this program may be made available to all employees upon request. Subcontractors are responsible for maintaining a Hazardous Chemical Inventory for all items they bring to the project. The

program will be updated when new chemicals or hazards are introduced into the working environment. The Project Superintendent/Foreman may request the needed Safety Data Sheets on all jobsite chemicals from the appropriate subcontractor and keep a copy in the field office.

Container Labeling

The Contractor will be responsible for all containers of hazardous chemicals entering the work site and will ensure that the chemical containers are properly labeled with:

- Chemical Name
- Hazard Warnings
- Name and address of the manufacturer, importer, or responsible party

If the chemical is to be transferred to a separate container, the new container must be properly labeled.

Employee Training & Information

- Before starting work, each contractor shall go over their copy of the HCP and any SDS applicable to their job. Depending on the jobsite, handouts or a video presentation may be utilized in the training.
- Before any new chemical is used, all employees will be informed of its use, will be instructed on safe use, and will be trained on hazards associated with the new chemical. All employees will attend additional training as appropriate to review the HCP and SDS.

Prior to a new chemical hazard being introduced into any section of the workplace, each employee will be given information and training by his/her immediate supervisor or the superintendent who is responsible for ensuring that SDS on the new chemical(s) are available prior to use.

Section 3 Specific Work Practices

Confined Space

Employees and subcontractors of Broaddus Construction shall not enter a confined space until the following requirements are met:

- Hazards are identified and evaluated.
- Workers entering the space are trained on confined space hazards and entry procedures.
- Workers entering the space are identified and made aware of possible hazards that may be encountered on that particular job.
- Appropriate danger signs have been posted.
- Proper personal protective equipment has been selected and issued to affected employees.

If a confined space is not entered because one of the conditions mentioned above has not been met, the confined space will be restricted to employees and others by erecting barriers, installing locks, and/or posting warning signs until requirements have been met.

Our policy is to reduce the need for confined space entry and eliminate, if possible, all confined space hazards in order to reclassify permit-required confined spaces to non-permit required confined spaces. When confined space entry is necessary, all provisions of this document are to be followed.

Confined Space Definition

A confined space means a space that: 1) is large enough and so configured that an employee can bodily enter and perform assigned work; 2) has limited or restricted means for entry or exit; and 3) is not designed for continuous human occupancy. Examples of confined spaces include but are not limited to storage tanks, process vessels, bins, silos, boilers, ventilation or exhaust ducts, sewers, pipe chassis, underground utility vaults, tunnels, and pipelines.

A permit-required confined space means a confined space that either: 1) contains or has the potential to contain a hazardous atmosphere, 2) contains a material that has the potential for engulfing an entrant, 3) has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section, or 4) contains any other serious safety or health hazard.

Responsibility

It is the responsibility of all trade supervisors and workmen to identify a confined work space and work with Broaddus to determine the need for confined space entry procedures where toxic or hazardous conditions may exist in a particular work area. Such procedures shall include, but are not limited to a permit system, lockout/tagout procedures, illumination and tools,

personal protective equipment, instrumentation (gas monitoring devices), signs and barricades, standby attendant, retrieval equipment, emergency plan, and training. Any subcontractor that is planning to work in a confined space shall provide said employees with the proper equipment needed to enter/exit the confined space and work safely in accordance with OSHA standards.

If a permit-required confined space is identified, the Project Superintendent shall notify the Project Manager to ensure proper safety procedures are planned, reviewed, and implemented. At the minimum, it will require the subcontractor to prepare a "site-specific safety plan" to specifically address the proposed procedures for working in the permit-required confined space. The safety plan shall be reviewed and approved by the Project Manager PRIOR to proceeding with any work in the permit-required confined space.

Cranes

General Requirements

- All cranes shall comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer.
- Rated load capacities and recommended operating speeds, special hazard warnings, or instructions shall be conspicuously posted on all equipment. Instructions or warnings shall be visible to the operator from person in control station.
- A boom angle indicator in good working order shall be provided.
- A poster with illustrations of hand signals to crane and derrick operators shall be placed outside the crane and must be visible to all employees.
- The designated competent person shall inspect all machinery and equipment prior to use and during use to make sure it is in safe operating condition. Any deficiencies shall be repaired or defective parts replaced before continued use.
- A thorough annual inspection of the hoisting machinery shall be made by a competent person or by a government or private agency recognized by the U.S. Department of Labor. The employer shall maintain a record of the dates and results of inspections of each hoisting machine and piece of equipment.
- Wire rope shall be taken out of service when any of the following conditions exist:

– In running ropes, 6 randomly distributed broken wires in one lay or 3 broken wires in one stand in one lay.

– Wear one-third the original diameter of outside individual wires – kinking, crushing, bird-caging, or any other damage resulting in distortion of the rope structures.

– Evidence of heat damage from any cause.

- Reductions from nominal diameter of:
  - More than 1/64 inch for diameters up to and including 5/16 inch.
  - 1/32 inch for diameters 3/8 inch to and including ½ inch.
  - 3/64 inch for diameters or diameters 9/16 inch to and including ¾ inch.
  - 1/16 inch for diameters 7/8- to 1 1/8-inch inclusive.
  - 3/32 inch for diameters 1 ¼ inch to 1 ½-inch inclusive.
- In standing ropes, more than 2 broken wires in one lay in sections beyond end connections or more than 1 broken write at an end connection.
- Wire rope safety factors shall be in accordance with American National Standards Institute (ANSI) B 30.5-1968 or SAE J959-1966.
- Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or other moving parts of equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.
- Accessible area within the swing radius of the rest of the rotating superstructure (counterweights), either permanently or temporarily mounted, shall be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane.
- All exhaust pipes shall be guarded or insulated in areas where contact by employees is possible in the performance of normal duties.
- All windows in cabs shall be of safety glass or equivalent that introduces no visible distortion that will interfere with the safe operation of the machine.

Entrance & Exit

- A ladder or steps shall be provided to give access to a cab roof where necessary for rigging or service requirements.
- On cranes, guardrails, handholds, and steps shall be provided for easy access to the car and cab.
- Platforms and walkways shall have anti-skid surfaces.
- Fuel tank filler pipes shall be located in such a position or protected in such a manner as to not allow spill or overflow to run onto the engine, exhausts, or electrical equipment of any machine being fueled.
- An accessible, approved fire extinguisher rated a 5-BC shall be available to all operating stations or cabs of equipment.
- Equipment or machines being operated approximate to electrical distribution or Transmission Lines.

- A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visible means.
- Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes.
- For utility lines, the minimum clearance between the lines and any part of the crane or load shall be 10 ft.
- In transit, with no load and boom lowered, the equipment clearance from utility lines shall be a minimum of 4 to 16 ft depending on the voltage of the utility lines.

- The employer without the manufacturer's written approval shall make no modifications or additions that affect the capability and operation of the equivalent.
- All jobs shall have positive stops to prevent their movement of more than 5 degrees above the straight lines of the job and boom on conventional type crane booms. The use of cable-type belly slings does not constitute compliance with this rule.
- No one will be allowed to ride material that is being hoisted.

Inspection Schedule for Crane Operations

- The operator will inspect each crane before each day's use, and weekly inspections will be performed as well. The Company using the equipment will provide the forms necessary to meet all compliance needs with each work order. It is the sole responsibility of the operators to complete the inspection forms.
- The monthly inspections will be done in the shop unless the equipment is leased to a project where the equipment cannot return to the shop. If such conditions occur, the furnishing contractors will go to the project to inspect and maintain the equipment.
- The annual inspections will be the responsibility of the furnishing contractor and done by an independent certified crane inspection serviceman.
- All the required inspection forms must be available for inspection.

Tower Cranes

The following applies to all tower cranes erected on Broaddus projects including 3rd party, subcontractor provided or joint venture.
Assembly/disassembly of any tower crane must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons. This person is considered the A/D director.
a. Pre-assembly/installation meeting

Prior to pre-assembly/installation the project manager and superintendent must conduct a pre-assembly/installation meeting with the crane supplier, erector, operator, 3rd party inspector

and the electrician. The purpose of this meeting is to identify the installation sequence, hazards and controls to be used to safely and properly install the tower crane.

b. *Foundations and structural supports*

Tower crane foundations and structural supports (including both the portions of the structure used for support and the means of attachment) must be designed by the manufacturer or a registered professional engineer. The installation of the tower crane foundation must be documented using the projects Quality Assurance program.

c. 3rd party independent inspection

A 3rd party independent inspection by a qualified inspection service must be performed on tower cranes.

A copy of the inspection report will be provided to BROADDUS before the crane is authorized for use. The BROADDUS Project Manager or Superintendent will schedule the required equipment inspections by a qualified inspector. Subcontractors leasing a crane are responsible for scheduling their initial equipment inspections and providing BROADDUS with a copy of all inspections.

Post-installation inspection must include a load test using certified weights, or scaled weights using a certified scale with a current certificate of calibration. The load test must be conducted in accordance with the manufacturer's instructions when available. Where these instructions are unavailable, the test must be conducted in accordance with written load test procedures developed by a registered professional engineer familiar with the type of equipment involved.

Maintenance

It is BROADDUS 's policy to follow all tower cranes manufactures recommendations on installation, erection, and maintenance. In the event the manufacture does not provide a specific maintenance schedule the following will apply:

At approximately 40 initial operating hours the tower crane will be inspected by the supplier, installer or 3rd party inspector and preventative maintenance completed.

At approximately every 720 operating hours (after the initial 40 hours) the tower crane will be inspected by the supplier or installer and preventative maintenance completed.

Jumping

Extending a tower cranes height, also known as "jumping", is considered a critical lift operation.

A 3rd party independent inspector must be on-site, inspect the new sections to be added, observe the installation or "jumping" process, and provide a post-erection inspection.

Pre-assembly/installation requirements as listed above in 4.a must be followed.

The Corporate Safety Director must be notified when the installation, jumping or dismantling date for any tower crane has been established for each tower crane.

Operation

Tower cranes shall be allowed to weathervane when not in operation.

Tower cranes (including affiliated transformers and power supply equipment) must be surrounded by a security enclosure when possible.

Base enclosure should be at least sixteen (16) feet high, made of 5/8" plywood and positioned six (4) to eight (6) feet from the sides of the tower crane base or vertical tower sections. The enclosure should have a lock controlled entrance.

The turntable access hatch, if equipped, must be locked at the end of each shift.

Rigging & Hoisting

a. All rigging devices should have permanently affixed identification stating size, grade, rated capacity, and manufacturer.
b. Specialty slings and hooks shall not be used to set steel or move materials over workers. "Shop-made" grabs, hooks, clamps, or other lifting devices are prohibited unless designed by a registered engineer. Shop drawings stamped by the design engineer must accompany these devices.
c. Each "pick" or hoisted load must be rigged by a qualified rigger. Qualified riggers are required to have evidence of training available on-site.
d. Loads shall not be lifted without tag lines. Tag lines should hang a minimum of 10' below the load and have no loops or knots.

Signaling

a. Crane signal person will wear high visibility vest during crane operations.
b. Crane signal person will be responsible for verifying that loads are properly tagged prior to being lifted.
c. Only approved standard hand signals or verbal command for crane, derrick and boom equipment shall be used.
d. Each signal person must be a qualified signal person.
The signal person must have documentation from a third party qualified evaluator showing that the signal person meets the Qualification Requirements, or the employer's qualified evaluator assesses the individual and determines that the individual meets the Qualification Requirements and provides documentation of that determination.

The employer must make the documentation for whichever option is used available at the site while the signal person is employed by the employer. The documentation must specify each type of signaling (e.g. hand signals, radio signals, etc.) for which the signal person qualified to use.

Personnel Hoists

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, as well as, required following major alteration of an existing installation. Scheduled maintenance and inspections of the hoists should not be more than three-month intervals. Records shall be maintained and kept on file for the duration of the job.
a. The hoist operator is responsible for completing a daily inspection of the cab, tower, hoisting equipment and door openings and latches. Daily inspections should be kept in a notebook or affixed to the inside of the cab.
b. Any tower erected inside of a structure must be fully enclosed on all sides throughout the height of the tower.
c. Normal and final terminal stopping devices shall be provided. Limits or pre-programming must not be overridden.

Lift Plans

Using lift plans identifies specific or special requirements needed during the lifting operation in order to be prepared for variables. It ensures that crane operators know and understand the hazards and limitation of the equipment they are operating. All cranes must operate under a "lift plan".
Lift Plan-The crane may make multiple lifts as long as the lift does not exceed the cranes maximum identified weight load distance, lowest identified boom angle and maximum identified weights do not change. Any changes to the identified maximum radius, boom angle or maximum weight will require a new lift plan.
Lift Plan Requirements:
a. All mobile cranes on site must have a valid lift plan. Lift plans must be completed daily.
b. Each crane operator (competent person) must complete/review the lift plan and verify the lift calculations (based on the load chart).
c. Each crane operator is responsible for ensuring that all lifts are completed under a lift plan.
d. The lift supervisor is responsible for ensuring the lift plan is completed daily. The lift supervisor is the person assigned responsibility for the lift operation.

Critical lifts- shall be defined to include: Tandem lifts, Lifts greater than seventy-five (75%) percent of Load Chart, Crane suspended Personnel Hoists, Non-Conventional outrigger placements and lifts using helicopters. All critical lifts will require a pre-pick meeting and written lift plan.

A critical lift plan must be completed and submitted to the Safety Director for approval **at least 5 working days** prior to the lift.

A pre-lift meeting must be conducted prior to the lift being started.

Demolition

During structural demolition the following will apply:
1. The subcontractor conducting the demolition will provide a site specific demolition plan.
2. All demolition must be conducted under the supervision of a competent person.
3. Fall protection must be in place and used when necessary, prior to demolition at or near an edge with a fall greater than six feet.
4. Dust protection and prevention steps shall be taken by the contractor performing the demolition and coordinated with the Superintendent.
5. Subcontractor performing the demolition shall provide and post all warning signs and barricades (in English and Spanish) securing the area prior to starting demolition.
6. Subcontractor performing the demolition shall control access to areas of demolition and will allow only authorized people in the area.
7. A charged fire protection hose shall be used as primary fire protection during demolition.
8. Other than the equipment operator, no worker is to be any closer than 1 ½ times the height of the structure being demolished while that work is being performed.

The Red warning barrier should be no closer than 2 times the height of the structures being demolished. If another structure is closer than this distance, measures must be taken to barricade all doors and windows that face the demolition area.
9. BROADDUS Project Manager should verify (owners) building asbestos hazard survey had been completed prior to beginning demolition or renovations.
10. Structural demolition occurring within 25 feet of a stair system requires the stair system to be shored or supported.

Electrical and Lighting Safety

All lighting and electrical work of any kind, whether permanent or temporary, must conform to the requirements of the National Electric Code, NFPA 70E and other applicable federal, state, and local codes. Each project shall have the electrical subcontractor include in the subcontract price all temporary electrical equipment, lighting and supplies.

Electrical Operations

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. 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.
Circuits in excess of 120 volts will be marked with "Danger -- High Voltage" signs whenever unauthorized personnel may come in contact with live parts. All DC circuits in excess of 50 volts will be identified with volt and amperage, and marked with “Danger” signs.

NFPA 70E

a. It is BROADDUS 's general policy to avoid "energized" work.
b. BROADDUS requires all Electrical subcontractors to comply with the most current NFPA 70E safety standards. NFPA 70E specifically outlines the minimum requirements for any work on "energized" electrical circuits.
c. Only electricians trained and qualified with NFPA 70E requirements will be allowed to perform energized electrical work.
d. In the event that energized electrical work is requested or required by the client a detailed Energized Electrical Work Permit must be submitted to the project team for approval prior to start.
e. Energized electrical work must be approved by the Owner, Manager of MEP and the Safety Director.

Responsibility

The electrical subcontractor is responsible for the installation, maintenance and inspection of the temporary lighting and electrical systems. All employees and workers are responsible for identifying defective tools, cords and equipment and removing them from service until repaired and tested.
a. The electrical subcontractor will conduct a weekly inspection of all temporary electrical power distribution units (spider boxes, receptacle panels) and receptacles. Each temporary electrical power distribution unit must be marked with an individual identification number, the date of each inspection and inspector's name.
b. The electrical subcontractor is responsible for properly securing all electrical equipment and circuits.

Daily Visual Inspection

This program applies to all cords and receptacles not part of the building or structures permanent power.
a. Prior to each day's use everyone using extension cords and power tools must perform a visual inspection to determine if any external defects exists (deformed or missing pins, insulation damage) or indications of internal damage exists.
b. Equipment found damaged or defective shall be immediately removed from service, destroyed or tagged "out of service" and shall not be used until repaired.

Lighting

The electrical subcontractor will provide temporary lighting for all areas of construction activity. All temporary task lighting not installed by the electrical subcontractor must be UL approved.
a. Temporary lighting systems will be maintained at all times by the electrical subcontractor to ensure they are operative and in good repair.
b. Temporary lighting shall provide a minimum of five (5) foot-candles in all areas.
c. All light bulbs shall be protected from accidental contact or breakage (bulb protectors).

d. All temporary light stringers must be manufactured with light sockets molded into the stringer, UL approved (or similar approval) and should be new corded (SO, SJO) and each socket suspended individually by the molded socket with non-conductive material.
e. Job built light stringers are prohibited. Temporary light systems made with Romex are prohibited.

Temporary Electrical Supply
a. All 120-volt, single-phase, 15- and 20-ampere outlets shall have approved (GFCI) ground-fault circuit interrupters for personnel protection. GFCI USE IS MANDATORY.
b. Any tools or equipment connected to permanent wiring of the building with an extension cord shall use individual (GFCI) protection installed between the receptacle and the extension cord.

Extension Cords
a. All extension cords shall be heavy duty type - U.L. listed for outdoors,
b. Extension cords must be a minimum of 12-gauge.
c. Extension cords shall be used in continuous lengths without splices.
d. All electrical cords and equipment must be UL approved.
e. All extension cords must be marked with company or personal identification.
f. Any cord found defective must be taken out of service and removed from the site immediately. Defective cords should be cut (after ensuring they are not plugged in) to prevent their reuse on projects.
g. Splices or repairs between the ends of an extension cord are prohibited.

Environmental Loss Control

BROADDUS Project Management Team should ensure that the following measures and procedures are implemented to control potential environmental hazards on each project.

Material Storage
All chemicals should be stored to prevent spills.
a. Types of materials stored will dictate the space between storage areas to prevent contamination by other materials and possible reaction with materials in storage.
b. All chemical dispensing should be performed over a drip tray and the drip tray must be kept clean and free of debris.
c. When chemicals are not in use, the containers must be securely closed.

Storm Water Pollution Prevention Plan
The Notice of Intent (NOI) must be submitted prior to starting any construction activity where soil will be disturbed.
a. A written plan developed by a consultant must be available on the project site.

b. Additional storm water permits may be required by local/City governments for construction operations.
c. The pollution prevention plan must also specify operation, maintenance and inspection procedures to minimize pollution from storm water runoff
d. Subcontractors are required to minimize soil erosion and loose dust at all times.
e. The SWPPP plan will specify applicable erosion control provisions and any modifications to the plan must be noted on the plan as required by the EPA.
f. All Notice of Intent (NOI) and SWPPP plans must be forwarded to the Safety Director for review and NOI signature.

Asbestos and Lead Based products

Prior to working in an existing building, the Owner is required to provide an Environmental survey. This survey should provide information on areas of the building that contain or may contain asbestos, Lead or other toxic substances. Based on the survey and the type of removal required, the abatement may be contracted to a remediation specialty company.

Heavy Equipment

This section applies to all employees who operate or work near forklifts or heavy equipment.

1. General

a. Operator is responsible for completing an equipment inspection prior to use.
b. Never ride as a passenger on a forklift or heavy equipment.
c. Never approach a forklift or heavy equipment without the operator's permission. Avoid standing on the blind side or behind forklifts.
d. Prior to operating the forklift or heavy equipment, the operator will inspect the equipment. Defective equipment must be tagged out of service.
e. Maintain a safe distance from pedestrians.
f. Ignition keys will not be left in the equipment when it is unattended.

2. Training

All forklift and heavy equipment operators must maintain documentation of training certification on-site at all times.
a. Only authorized and properly trained employees shall operate forklift or other heavy equipment.
b. Each operator shall have a copy of their training certification in possession at all times.
c. Training must meet the requirements listed in 1910.178 Powered Industrial Trucks.

3. Use

The following are the minimum safety practices for the operation of fork lifts and heavy equipment (bulldozers, backhoes, etc.):
a. Don't leave loads unattended
b. Equipment must be operated within the safe speed, 10 miles per hour or posted authorized speed, and within the rated load capacity.

c. Mobile equipment should never be left unattended without first shutting off power, neutralizing controls, setting brakes, and lowering forks or bucket. Do not park on an incline.
d. All mobile equipment must have a UL rated fire extinguisher on board.

Fall Prevention/Protection

This policy is designed to protect all workers from injury resulting from falls from elevations 6 feet or greater. When possible, Fall Prevention should be the first option. BROADDUS requires 100% fall protection whenever workers are exposed vertically or horizontally to falls six (6) feet or greater. Contractors shall submit a written Fall Protection Plan outlining areas where non-conventional fall protection cannot be used. The plan must be reviewed and approved by Broaddus management prior to starting any framing activities.

Violating The Fall Protection Policy is Grounds for Immediate Removal.

BROADDUS WILL NOT LOAN OR PROVIDE ANY PERSONAL FALL PROTECTION EQUIPMENT INCLUDING, HARNESSES, LANYARDS, OR ANCHOR POINTS TO ANYONE

Responsibilities

a. BROADDUS is responsible for:

- Ensuring BROADDUS employees are properly trained prior to using personal fall protection equipment.
- Communicating to subcontractors their responsibility to meet the fall protection requirements.
- Conduct ongoing inspections of all guardrails systems.
- BROADDUS will provide anchorage points for BROADDUS employees only.

b. Subcontractors are responsible for:

- Securing adequate quantities of fall protection equipment for the persons involved in work from elevated surfaces.
- Reviewing the use of the equipment with the wearers, observing the proper use of fall protection equipment, notifying affected personnel and supervisors of any failure to use the equipment or failure to use it correctly.

Fall Hazard Assessment

The wide range of activities and circumstances on a project can vary between crews using fall protection. For this reason, a Fall Hazard Assessment (FHA) is used by foreman and crews as they pre-plan their daily work assignments that include working at elevated heights.

The Fall Hazard Assessment is similar to a THA but is Fall Protection specific. The competent person is required to identify the various methods and applications of fall protection to be used by their employees. Fall Hazard Assessments must be completed prior to mobilization and reviewed and approved by the Broaddus Supervisor. The approved fall hazard assessment shall be reviewed with the crew before work begins.

Because the foreman and crews are the most knowledgeable about the work to be performed and the associated hazards, they should address any deficiencies in the FHA that may have

occurred due to changing site conditions. Having workers directly involved results in increased cooperation and compliance on the project.

BROADDUS 's first choice of fall prevention is an approved guardrail system. A Guardrail system means a barrier erected to prevent employees and workers from falling to lower levels.

An approved guardrail system consists of:

1. All wooden guardrails and stanchions attached to concrete must be secured with concrete screws or appropriate anchors. The use of nails to secure wood to concrete does not meet our expectations.
2. If wire rope is used for top rails and mid rails the wire rope must be flagged at 6-foot intervals with high-visibility material. Wire rope must be at least one-quarter inch nominal diameter.
3. When guardrails are used around holes which are used as points of access (such as ladder openings), they must be provided with a gate, or be so offset that a person cannot walk directly into the hole.
4. All hoist areas must be protected by guardrail systems or personal fall arrest systems. If guardrail systems are removed to facilitate hoisting operations and an employee or worker must lean through the access opening or out over the edge of the access opening that employee or worker must be protected from fall hazards by a personal fall arrest system.
5. Any subcontractor removing a guardrail or portion or the guardrail must have the project Superintendent's approval prior to removing guardrails. Subcontractors moving, removing or altering any guardrail are required to replace or repair guardrail prior to leaving the area.

Covered Floor and Roof Openings (Hole Covers)

Guarding and/or covers are not to be removed until other means of fall protection are in place. Employees installing or removing guarding or covers must be protected by alternative fall protection. Employees are prohibited in any area that could expose them to a fall unless proper fall protection procedures are in place.

1. Covers may be used on all openings 20.0 square feet or less in area and if one dimension is 3.0 feet or less.
2. For openings 20.0 square feet or greater the openings shall be barricaded with standard guardrails and toe boards or be covered as a temporary deck reinforced with a minimum of 4X4" and all ends covered with a toe board.
3. In areas where scissor lifts or other mechanical equipment can contact a "covered hole" six (6) inches or greater in diameter the hole cover must be built as a raised cover.
4. Each Subcontractor shall be responsible for covering all floor openings it has created for its use. The following requirement shall be followed:
    a. If the holes are to be used for access or to pass material through, they should then be barricaded with a handrail, complete with gates, removable guardrails or chains.
    b. All covers shall be made from a minimum of three quarter inch (¾") PLYWOOD with a minimum of 6 inch overlap on all sides.

c. All covers shall be fully painted with high visibility paint or marked "HOLE" with contrasting color.
d. The cover shall be securely fastened on at least two sides. Covers must be secured with concrete screws or appropriate anchors. The use of nails to secure wood to concrete does not meet our expectations.

Personal Fall Arrest System (PFAS)
Employees using personal fall protection (harness, lanyard and anchor point) must be trained on the proper use and inspection of the equipment. Personal fall protection is a system used to arrest an employee in a fall from a working level. It consists of an anchorage point, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations.

Warning Line System
Means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, PFAS, or other system to protect employees in the area.
1. The warning line shall be erected around all sides of the roof work area.
2. The warning line shall be erected not less than 15 feet from the roof edge.
3. Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.
4. The rope, wire, or chain shall be flagged at not more than 6-foot intervals with high-visibility material.
5. No employee or worker is allowed in the area between a roof edge and a warning line unless the employee or worker is performing roofing work in that area.

Safety Nets
Safety nets are the last option and must be approved by the Project Manager, Superintendent and Corporate Safety Department.
Safety nets shall be installed as close as practicable under the walking/working surface on which employees are working, but in no case more than 30 feet (9.1 m) below such level.

Fire Prevention/Protection

During the construction phase of any project, there is a much greater possibility of a fire than in a structure that has been completed and placed into service. This is partly due to the accumulation of scrap lumber, packing, wrapping, and other combustible refuse. In addition, the use of cutting, grinding, welding, temporary lighting, heaters, etc. present the potential for extensive loss due to fire. Lack of operating detection and sprinkler systems increase the risk of loss from a fire. Good housekeeping procedures are often the best tool to prevent fires.

Open Flame Hot Work Permit

At times it may be required or necessary to issue an Open Flame Hot work permit. Permits should be issued when work with an open flame or torch is required is an occupied building, substantially complete building, in areas that an open flame may cause damage or as required by the client. The Hot Work Permit is issued by the superintendent and requires the person doing the "flame work" to comply with additional safe guards. Regardless of the issuance of a Permit all open flame and torch operations require a fire watch for the duration of the work and for 30 minutes after work is complete.

Fire Fighting Equipment

- Access to all firefighting equipment and egress shall be maintained at all times.
- Operational capabilities of firefighting equipment and control of egress shall be managed at all times.
- Defective or discharged equipment shall be immediately replaced and tagged "OUT OF SERVICE."
- During welding, cutting, or grinding operations, there shall be a fire extinguisher with at least a 10B rating in close proximity.
- A portable fire extinguisher, rated at not less than 2A, shall be provided for each 3,000 SF of the protected area. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 75 ft.
- One or more fire extinguishers rated at not less than 2A shall be provided on each floor. As a minimum, fire extinguishers shall be located next to stairways in multi-story buildings.
- Where more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are being used on the jobsite, a fire extinguisher rated at not less than 20B shall be provided at a distance of between 25 and 75 ft.

Fire Prevention

- All employees shall be made familiar with the use of fire extinguishers.
- Smoking shall be prohibited in the vicinity of operations that constitute a fire hazard, and shall be conspicuously posted: "NO SMOKING OR OPEN FLAME"
- Areas where cutting and welding are performed shall be kept clean, and any accumulation of trash, rags, etc. shall be removed. Consideration should be given to the distance that sparks or slag can travel.
- When practical, objects to be welded, cut, or heated should be moved to a safe location. If this cannot be accomplished and if all the fire hazards cannot be removed, appropriate steps shall be taken to confine the heat, sparks, slag, etc.
- Store flammable liquids in approved safety containers (not plastic). Keep such containers in an approved flammable cabinet.
- Electrical wiring or repairs are to be in accord with code.
- Fuel, oil, grease, and any flammable materials spill shall be cleaned up immediately.
- Accumulations of trash, scrap lumber, packing and other debris are to be cleaned up regularly.
- Open fires are PROHIBITED.
- Above ground fuel storage tanks can only be used with prior Broaddus approval.

First Aid/Medical Procedures

The Company will provide first aid services and arrange for emergency transportation of employees who sustain occupational injuries or illness.

- First Aid Services

– There should be available on all projects, a person trained in standard First Aid.
– All subcontractors are required to have at least one person trained in CPR and First Aid on site at all times.
– Each subcontractor shall have First aid supplies available to all employees for the treatment of work-related injuries and sudden illness.
– Medical cases which require treatment beyond first aid will be referred to an offsite medical facility as determined by the severity of the injury or illness. Arrangements with the medical facilities, i.e. occupational medical clinic, hospitals, etc. should be prearranged prior to startup of the project.

- Transportation, Non-Emergency

– Non-emergency transportation shall be provided to an occupational medical clinic or to a designated physician. Injured employees should never drive themselves to a clinic.

- Transportation, Emergency

– In a situation where the injured cannot be moved, the person on the job responsible for first aid will go to the location and administer first aid until the ambulance arrives.
– The proper handling of injured or ill employees and their transportation to a hospital is of crucial importance.
– The method of transportation to the hospital or first aid facility will be prearranged.
– In all cases of injury or death, the Superintendent or their designee shall call the medical facility, if possible, while the ambulance is still en-route or certainly while the victim is still in the emergency facility to give them all the available information regarding the nature and the extent of the injury or illness.

- Injury Management

– An employee who has sustained an on-the-job injury or illness may return to work provided that the attending physician has approved in writing and provided that the normally assigned job of that employee is still available and he/she meets any physical restrictions or limitations.
– Employees who are given restrictions to their work may be permitted to return to work as long as there is work available to accommodate the restriction(s) imposed by the attending physician. A Return to Work agreement will need to be initiated in those cases.

Blood borne Pathogens

Employees involved in the care of the injured should be aware of possible exposure to *Blood borne Pathogens* (pathogenic microorganisms that are present in human blood and can cause disease in humans). The only remotely foreseeable exposure to our employees would be when acting as a First Responder. All bodily fluids will be treated as if they could contain blood and are infectious. Universal controls will be used when exposure to bodily fluids is possible.

If contact with bodily fluids should occur, employees will be offered, at no cost, Hepatitis B vaccine treatment and screening. All waste materials from cleanup activities shall be disposed of as biohazards.

Flagging and Traffic Control

1. Flagging

a. Flaggers must be trained and should understand what the operation involves in order to anticipate traffic demands. Some cities require flaggers to be certified by local training centers. If the city does not have a minimum requirement, the flagger should be trained in accordance with the most recent Manual on Uniform Traffic Control Devices (MUTCD).
b. Flaggers should be equipped with the proper equipment to perform their job. This includes approved paddle, class II reflective vest, and hardhat. They should give clear and definite signals to control traffic.
c. Flagmen working in or near a public roadway must wear class II high visibility vest.
d. Each subcontractor shall furnish flagmen as necessary to control the work traffic.

2. Traffic Control

a. All traffic control operations used on any public roadway must be under a traffic control plan that conforms to the most recent Manual on Uniform Traffic Control Devices (MUTCD).
b. Any changes, due to construction activity, to existing roadways or traffic lanes must be made under a traffic control plan. This plan must be developed by a qualified person prior to affecting roadways or traffic lanes.
c. Traffic control devices or lane closures should be inspected daily and inspections documented weekly. The location of all traffic control devices should be marked for quick re-alignment and inspection.
d. During operations that will disrupt traffic on adjacent streets, a qualified flagman will be used to direct traffic traveling in each direction and in areas entering and exiting the site. The Subcontractor disrupting traffic will be responsible for assigning flagman necessary signage and equipment.

Housekeeping & General Safety Requirements

General

The following guidelines have been developed to reduce jobsite hazards and to minimize accidents, injuries, and property damage. Site cleanliness and good housekeeping is one of the key elements in maintaining a productive and safe project. Employees conduct and work practices are equally important factors. The following shall apply to all Broaddus Construction projects.

- It is the responsibility of each employee of Broaddus Construction and all subcontractors to keep their areas of the site free of trash and debris. Clean up should be conducted on a daily basis and shall consist of a floor sweep of each work area. Debris stockpile areas or disposal containers should be provided and located to meet specific project requirements. Additionally subcontractors shall provide employees and resources necessary to empty disposal containers into trash dumpsters.
- Certain areas of the project may be designated for eating and smoking and will require regular clean up.

- All roadways, emergency lanes, building entrances, and exists should be clearly marked up maintained clean and free of obstruction.
- Horseplay, fighting, gambling, or malicious mischief will not be tolerated and shall be cause for immediate dismissal.
- If BROADDUS notifies a subcontractor that they are not maintaining acceptable levels of housekeeping, BROADDUS may perform the cleanup work at the subcontractor's cost and expense.

Inspections

The purpose of regular safety and equipment inspections 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 also an ideal time to complement those who are doing their jobs safely and well.

1. Safety inspections

a. All Supervisors should conduct daily safety inspections of the project.

b. Issues that cannot be corrected immediately should be noted and addressed with the superintendent and subcontractor. Any noted deficiencies should be corrected as soon as possible.

c. The supervisor for each subcontractor will walk the job site daily to inspect and monitor compliance with safety program.

d. Many items used in construction are required to be inspected prior to each use. These include but are not limited to-Scaffolding, ladders, motorized equipment, power tools, etc.

Broaddus reserves the right to review documentation of inspections at anytime.

Ladders, Stairs, & Ramps

Jobsite Use

- Ladder feet should be placed on a substantial, level base and the vicinity of the legs should be kept clear of debris and should afford a non-skid surface. Both the top and the bottom of the ladder should be secured to prevent displacement.
- Ladders leading to landings or walkways should extend at least 36 inches above the landing and be securely fastened. The front of the ladder should be placed approximately ¼ of its supported length away from the vertical plan of its top support. No employee should attempt to carry heavy loads while ascending or descending a ladder and side reach from a ladder should be kept to a minimum. Try to pick an area out of normal traffic pattern to erect ladders to decrease the hazard of their being accidentally displaced.
- Metal ladders are prohibited.

- If it is necessary to place a ladder in or over a doorway, barricade the door and post warning signs.
- Keep both feet and a hand (or 2 hands) on the ladder rungs unless you are secured to prevent falling. Do not reach out too far, or place one foot on a line or piece of equipment. Change the position of the ladder as often as necessary.
- Face a ladder when working from it.
- Only one man on a ladder at all times!

Straight & Extension Ladders

- Place ladder so the distance at the bottom footing is ¼ (0.25) the vertical distance in height.
- Ladders must be equipped with tie-off rope and non-skid safety feet.
- Ladders must be adequately tied off.
- The ladder top must extend 3-ft beyond supporting object when accessing elevated work area.
- After the extension section has been raised to desired height, check to see that safety dogs or latches are engaged and extension rope is secured to a rung on the base section of ladder.
- Extension ladders must be overlapped a minimum of 3 rungs.
- Do not take extension ladders apart to use either section separately.

Stepladders

- Always open and lock spreaders in place. Do not use like a straight ladder.
- Never stand on the uppermost platform or top rung of a stepladder.
- Do not place tools or material on rungs or platform.

Job-Built Ladders

- Job-made ladders shall be constructed in accordance with CFR 1926.1053

Stairways

- Stairway or ladders shall be provided at all personnel access points where there is a break in elevation of 19 inches or more and no ramp, runway, or sloped embankment is provided.
- Employees will not be allowed to use any stairway on which construction work is being performed.
- Stairs or ladders will be kept clear for access at all times.
- All stairs or ladder access areas must have fall protection systems such as handrails or guardrails.
- Stairs having 4 or more risers or rising more than 30 inches shall be equipped with one handrail and on stair rail system along each unprotected side or edge.

Ramps

- Earth Ramps

- Ramps constructed of earth shall be compacted enough to allow expected loads to travel safely on the ramp surface. The slope shall be no steeper than 1 ft for every 1 ½ ft of horizontal length.

- Job-Built (Wood) Ramps
- Wood ramps must be a minimum of 22 inches wide for each direction of travel.
- Wood ramps must have guardrails along each open side if the fall distance to surfaces below is greater than 4 ft. Daily inspection of guardrails is required.

Personal Protective Equipment

General

Personal Protective Equipment will not prevent an incident. It will, however, offer a significant amount of protection to a worker and reduce the effect of an incident as long as it is used properly and consistently.

Head Protection

- Hard hats will be worn 100% of the time on the construction site unless otherwise instructed by the Broaddus Superintendent.
- All hard hats must meet ANSI/ISEA Z89.1-2014 (Class E, Type I) Head Protection. Hard hats must be worn correctly with the bill forward.

Hand Protection

- Each contractor will have a variety of gloves available on site for employee's use. Each supervisor or foreman should assess the task and select the proper glove before the work begins. Employees are required to wear the proper hand protection when working in areas where a hazard exists that could cause injury to hands and fingers due to skin absorption of chemicals, severe cuts, lacerations, abrasions, punctures, burns or temperature extremes.
- Hand protection must meet the following minimum requirements:

  a. Adequately protect against the particular hazard for which they were designed;
  b. Fit properly without interfering with hand and finger movement;
  c. Be durable, kept clean and in good condition;
  d. Fingerless, half-length and open tip gloves are prohibited;

- If a greater hazard exists and the employee can demonstrate that wearing gloves would create a greater hazard to the employee, then wearing gloves will be exempt. An example might be using rotating machinery where the glove, if caught, would cause a more extensive injury.

Foot Protection

- Employees are required to wear sturdy footwear which will provide adequate protection against injury to the feet. Sandals, light canvas shoes, etc. are not allowed for wear in construction areas.

- Employees are expected to purchase and wear work boots or shoes with soles that are resistant to penetration and upper parts that offer ankle protection. Some job sites may require the wearing of steel toe safety boots and employees will be expected to comply.

Eye and Face Protection

- Safety Glasses will be worn 100% of the time on the construction site unless otherwise instructed by the Broaddus Superintendent. Eye protection must meet ANSI Z87.1. Prescription glasses must also meet ANSI Z87.1 unless worn in conjunction with safety glasses or goggles).
- Safety eyewear and a face shield shall be worn when specific duties such as grinding, chipping, or any other task that might result in chips, sparks, or a danger to the face.
- Face shield must be worn when chipping, cutting concrete or metal, grinding concrete or metal, or transferring liquid from one container to another or where operations present potential eye or face injury from physical, chemical or radiation agents.
- When a welding helmet provides the filtering lens, impact protective lenses will be worn inside the helmet to prevent injury when the helmet is raised.

Safety Harnesses, Lanyards, & Lifelines

- Fall protection, as required by OSHA/MSHA and the Company Safety Manual, shall be provided for employees.
- During new-hire orientation and re-emphasized during safety meetings, each employee shall be made aware of the Company's policy to wear safety harnesses when the location and work dictates. This policy is to be strictly enforced.
- Any employee whose work places them outside a protected area without guardrails or work is to be performed on suspended scaffolds or any working surface where they may be subject to a fall of 6 ft or more, shall be secured by a safety harness, lanyard, and lifelines as needed.
- Lifelines shall be secured to a point above operations capable to withstanding a minimum of 5,000 pounds dead weight.
- Safety harnesses, lanyards, lifelines, and associated hardware shall be inspected before each use for wear and possible damage. If this equipment is subjected to in-service loading (an actual fall situation), it is to be removed immediately from service. Periodic inspections of all harnesses, lanyards, lifelines, and associated equipment that have been kept in storage shall be completed to reveal any damage or deterioration that may have occurred. This inspection should be documented for all harnesses, lanyards, and lifelines. It shall include: date of inspection, condition of equipment, and the serial number of each item.

Hearing Protection

- Employees exposed to noise levels in excess of the Occupational Exposure Limit of 85 dBa (higher levels for short periods of exposure) should have hearing protection.
- The 2 types of hearing protection available to reduce the exposure to excess noise levels are:
  - Ear plugs (in most instances are acceptable hearing protection).
  - Earmuffs (may be added in very high noise areas).
- Employees are to be informed of the hazards associated with exposure to excess noise energy and the purpose and limitations of protective hearing devices. The use of protective hearing equipment is mandatory in high noise areas.

- Supervisors are required to have an adequate supply of hearing protection devices on-site.

Respiratory Protection

- In areas where excessive dust, fumes or mist are present, every effort must be taken to engineer controls measures to limit exposure. In areas where engineering controls are not feasible personnel may be provided and required to wear appropriate protection where there is an exposure to inhalation, ingestion, skin absorption or contact with any material or substance that is deemed to be of a hazardous nature. Personnel required to use respiratory protection must be in compliance with OHSA 29 CFR 1910.134 Respiratory Protection standard. Personnel must be trained to select, use, clean and store all PP properly. For projects that require the use of respirators, a written respiratory protection plan must be implemented. The safety department will provide and administer the written plan.
- Workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. Projects may provide respirators (dust masks) for employee's voluntary use. Employers are not required to include in a written respiratory protection program for those employees whose only use of respirators involves the voluntary use of filtering face pieces (dust masks).
- Employees who have beards, goatees, sideburns, or any other facial hair, which prevents a good seal of the respirator, will not be permitted to work in conditions requiring respirators.

Vests/Clothing

- Traffic Safety Vests (approved design and color) will be worn whenever employees are working around any vehicular traffic, such as working on or near public roadways adjacent to work areas.
- Full length pants must be worn. No large holes or tears that could catch on material or equipment will be allowed. Pajamas, sweat pants, sweat suits, shorts are not allowed.
- Pants are to be worn with the waist band of the pants above the hips and around the waist. Sagging or excessive length pants are prohibited.
- Shirts must be worn at all times. Shirt sleeves must be at least 4" in length. No obscene, vulgar or inappropriate displays on shirts will be allowed and will be at the discretion of the BROADDUS Project Manager or Superintendent.
- Superintendents have the option of extending the use of high visibility vest throughout construction.
- Additional PPE may be required depending on the specific job hazard or task may include specialty clothing that protects employees from specific hazards.

Special Considerations

- When a project has attained substantial completion or has received a temporary certificate of occupancy (TCO), the superintendent may, at his discretion, not require hard hats to be worn during "punch work".

Sanitation, Drinking Water, & Illumination

Sanitation

- An adequate number of portable toilet facilities should be provided throughout the project, in accordance with OSHA requirements.
- Proper hand washing facilities must be provided for all employees who work with paints, coating, concrete, and other materials that may harm the skin.

Drinking Water

- An adequate amount of portable drinking water shall be provided by each contractor/subcontractor for their employees. Drinking water containers shall be clearly marked. Single service paper cups shall also be provided by each drinking container, which shall be kept in a sanitary dispenser. A trash bucket should be provided near each drinking water container. The use of a single common drinking cup shall be prohibited at all times.
- Non-portable water (water not suited for consumption) shall be clearly marked.

Illumination

- All areas, aisles, stairs, ramps, runways, corridors, offices, shops, and storage areas where work is in progress shall be lighted with either natural or artificial illumination.
- The minimum illumination requirement for general construction areas shall be in accordance with OSHA standards.

Scaffolding

General

Scaffolding and elevated platforms must be installed only by trained and qualified persons who are supervised by a competent person. All scaffolds, regardless of type, should be designed to carry four times the maximum intended load.

Before climbing on a scaffold, inspect visually to determine that:

- Handrails, mid-rails, toe boards, and platform decking are in place.
- All wheels are locked on rolling scaffolds.
- A proper ladder is set for safe climbing.

Requirements

- Prior to erecting any scaffolding or elevated work platform the subcontractor installing the scaffolding or elevated work platform will meet with a BROADDUS project representative and review the location, type of scaffolding or elevated work platform to be installed.
- All Scaffolding must be erected and dismantled under the supervision of a competent person. In addition the following must be completed:

Contractor's designated competent person shall perform a daily inspection.

Contractor must identify their competent person in writing prior to start of work.

- Inspection tags apply to mobile scaffolding as well.
- Fall protection is required for any non-mobile scaffold platform over six feet (6'). Mobile scaffolds must have fall protection for any platform over three feet (3').

- All employees/workers working on scaffolding must be trained prior to using scaffolding. Each subcontractor must have documentation of employee training available for review.

Installation

During the installation of scaffolding or elevated work platform the following will apply:

- All scaffolding systems must be installed according to the manufactures recommendations.
- Workers erecting, moving or dismantling any scaffold system must be trained in the specific type of system they are working on and any erecting, moving or dismantling must be completed under the supervision of a competent person.
- Scaffolds with work platforms or decks more than six feet (6') above the ground must have standard guardrails and toe boards attached on all open sides and ends.

Use

- Each contractor using any scaffolding must provide a competent person to perform a daily inspection. Inspections must be documented by tagging the scaffold.
- Inspection tags must be attached at each access point.
- No employee shall use or work on scaffolding unless they have received user training on the specific scaffold type to be used, this includes all assembled scaffolding, exterior and interior scaffolding, all mobile scaffolding and Baker type scaffolding.
- No employee shall work on scaffolding, of any type, unless it has been inspected and properly tagged.
- Ladders must be used to climb scaffolds at all times. Both hands should be free of tools/materials when ascending or descending a scaffold.
- When freestanding mobile scaffold towers are being used the height of the work platform shall not exceed four times the minimum base dimension.

Mobile Scaffolding

- All mobile scaffolding shares the same requirements for use regular frame scaffolding.
- Mobile scaffolding must be inspected and tagged prior to each use.
- Stacking scaffold frames shall not exceed the manufactures guidelines. A copy of the manufacturer's guidelines must be available at the project.
- All mobile scaffold over three feet (3') MUST HAVE GUARDRAILS.
- Casters shall be properly designed for strength and dimensions to support four times the maximum intended load. All casters shall be provided with a positive locking device to hold the scaffold in position. All casters must be in the locked position when scaffold is occupied.
- A ladder or stairway shall be provided for proper access and exit and shall be affixed or built into the scaffold and so located that when in use it will not have a tendency to tip the scaffold.
- Employees should not propel themselves while working on scaffolds.
  Non-stop Scaffolding
- Non-stop scaffolding that requires the worker to access the scaffold platform by climbing the tower frame must provide a fall protection method for workers while they climb the tower. The fall protection method used must not interfere with the raising or lowering of the platform.
- Personnel must wear fall protection equipment properly tied off on any scaffold platform; not equipped with standard handrails, mid-rails, or complete deck.

Security/Crime Prevention Policy

Policy

- Security of people, office, and property on all Company projects and offices must be considered and planned for prior to start of construction. Prevention from harm and prevention of loss of equipment, supplies, or in-place construction through theft or vandalism is vital to the success of al projects and the Company.
- Implementation of job site security measures will be the responsibility of the Project Superintendent. The guidelines stated below are to be used as an aid in the development of an effective security program for each Company project.

Preamble

The need for security varies with the geographical location of the jobsite, existing security provided by owners, and the stage of construction. Consideration and planning must be given to this aspect of the construction operation. As conditions change, so much the security plan.

Construction Site

- It may be required under certain conditions that either a full-time or after-hour guard service is provided at the construction site. The guard's responsibilities will include controlling access to the project, parking, after-hours security, and material delivery and assist any police agency in case of an incident.
- In the absence of a full-time guard service after working hours, a silent remote reporting alarm may be provided. A licensed security and alarm service company would install the system. It will detect noise, motion, or entry within the office and report, over a dedicated telephone line, to the alarm company which will, in turn, contact the police.
- Phone numbers to contact responsible Company personnel in the event of an emergency shall be displayed in such a way as to be visible to security or police personnel from outside the trailer or else formally made available to the alarm company and the police.
- All computers, calculators, typewriters, other office equipment and small tools, etc. shall be inventoried. This shall include a description and appropriate serial numbers. Tools shall be engraved or marked with identification.
- Outside lighting should be provided to illuminate the parking areas, materials storage areas, and, if feasible, the area under construction.
- All tools and storage trailers and sheds shall be locked after normal working hours.
- All master and extra keys are to be kept in a locked cabinet or container and under the control of the Project Superintendent.

Jobsite

- The jobsite may be totally enclosed with a fence, equipped with vehicle and personnel gates.
- Appropriate signs stating, "Access is limited to construction personnel only. All visitors must report to the Company's Office" and "Hard Hat Area, and Safety Eye Wear Protection Required" shall be prominently displayed on the fence.
- Parking for construction personnel shall be in any area so as not to interfere with normal construction activities.
- Adequate area lighting shall be provided to illuminate all parking, storage, office, and construction areas.

- All stored materials shall be kept in a secure location – either inside a locked storage trailer, inside the building in a secure area, or in a well-lighted location.

Procedures for Jobsite Theft and Vandalism

- Prevention Action
- Request regular checks of your site by the police.
- Identify the property lines with "Reward" signs and "No Trespassing" signs.
- Enclose the area in fence, if possible. **Lock the gates, trailers, and tool boxes each night. Chain down small toolboxes and equipment**.
- Mark all tools and equipment with your company insignia.
- Keep records of serial numbers on all tools and equipment.
- Light job sites, access roads, gates, and entrances.
- Require adequate locks on all new equipment you purchase.
- Lock all cabs, filler caps, engine compartments, etc. of heavy equipment.
- When Theft or Vandalism Occurs
- **Report All Theft to Police.** Be specific, including serial numbers, model numbers, color, and size. Give all details to the police and to the Main Office. No theft is too small to report.
- Aggressive Behavior and Workplace Violence
- It is our policy to maintain a safe and healthy work environment for all employees and workers and to promote high quality standards. As part of this policy, everyone on the job site is expected to display respect and cooperation with coworkers and management. Employees and workers will be held accountable for aggressive behavior.
- Employees/workers are required to report all "threatening" behavior to their direct supervisor. Any supervisor receiving a report of aggressive behavior must immediately report it to the Project Manager or Superintendent. All reports of aggressive or potentially violent behavior will be investigated.
- Workers are to refrain from:
  Abusive language. Threats Verbal or physical intimidation Assaults, fighting or other physical contact
  No weapons of any type are allowed on the jobsite.

Steel Erection

Steel erection activities include hoisting, laying out, placing, connecting, welding, burning, guying, bracing, bolting, plumbing and rigging structural steel, steel joists and metal buildings; installing metal decking, curtain walls, window walls, siding systems, miscellaneous metals, ornamental iron and similar materials; and moving point-to-point while performing these activities.

1. Notification Before Erection

The Project Manager must certify in writing to the steel erector that:

a. Concrete in footings, piers, or walls have reached 75% of design strength or are of sufficient strength to support imposed loads.

b. Any repairs, replacements or field modifications to anchor bolts must have approval by structural engineer of record and must provide written notification to the erector.

2. Fall Protection

The steel erection subcontractor is required to provide 100% fall protection at all times.
a. Perimeter fall protection must be installed during initial structural assembly.
b. 100% fall protection must be provided when working above 6' with no exceptions.

3. General Provisions

a. Prior to starting steel erection activities the steel erection subcontractor must submit a site-specific erection plan developed by a qualified person and be available at the work site.
b. All columns shall be secured with a minimum of four anchor bolts before beam erection begins. If the erection method is direct weld, the minimum weld for erection is to be determined by the design engineer.
c. Fall protection training is required by the employer and must be documented.

Task Hazard Analysis

1. Purpose

The Task hazard analysis (THA) section of the safety program is designed as a guide for pre-job/task planning of work. The task hazard analysis addresses the tasks that will be performed, the hazards involved and the actions and tools used to prevent those hazards from causing injury or accident. A task hazard analysis is used in pre-work safety meetings with employees about to engage in the work or task. Each subcontractor will be required to complete a daily THA for each job/task. THA's must be available for review or audit.

2. Responsibilities

Immediate Supervisor is responsible for:

- Completing the required THA with the work crew
- Reviewing the THA with the work crew prior to them starting work
- Keeping a copy of the THA available at the work location
- Having the crew sign the THA
- Monitoring work crew for compliance with THA
- Reviewing and updating the THA when necessary

Employee/Worker

- Review and sign the THA prior to starting job/task
- Ask question if the instructions are unclear or confusing
- Ensure the required materials, tools and equipment are available

Tools

General Requirements

- **Guarding**
  - When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in use.

  - Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts or equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard.
- **Personal Protective Equipment**
  - Employees using hand and power tools and exposed to hazards of falling, flying, abrasive, or splashing objects, or to harmful dust, fumes, mist, vapor, or gases shall be provided with the particular approved personal protective equipment necessary to protect them from the hazard.
- **Constant Pressure Switch**
  - All hand-held power tools shall be equipped with a constant pressure switch that will shut off the power when the pressure is released.

Hand Tools

- Employer shall not issue or permit the use of unsafe hand tools.
- Wrenches, including adjusting pipe, end, and socket wrenches, shall not be used when jaws are sprung to the point that slippage occurs.
- Impact tools such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.
- The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool.

Power-Operated Portable Tools

- **Electric Power Tools**
  - Electric power-operated tools shall either be of the approved double insulated type or be grounded through the use of the three-wire system.
  - The use of electrical cords for hoisting or lowering tools shall not be permitted.
  - All electrical extension cords and pigtails will be a three (3) conductor type.
- **Pneumatic Power Tools**
  - Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.
  - Safety clips or retainers shall be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.
  - Compressed air shall not be used for cleaning purpose except where reduced to less than 30 PSI and then only with effective chip guarding and personal protective equipment. The 30 PSI requirement does not apply for concrete form, mill scale, and similar purposes.
  - The manufacturer's safe operating pressure for hoses, pipes, valves, filters, and other fittings shall not be exceeded.
  - The use of hoses for hoisting or lowering tools shall not be permitted.
  - All hoses exceeding ½-inch inside diameter shall have a safety device (excess flow valve) at the source of supply or branch line to reduce pressure in case of hose failure.
  - All fittings will be safety wired to prevent accidental uncoupling.

- **Fuel-Powered Tools**
  - All fuel-powered tools shall be stopped while being refueled, serviced, or maintained, and fuels shall be transported, handled, and stored in accordance with the fire prevention.
  - When fuel-powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of person protective equipment shall apply.
- **Powder-Actuated Tools**

- Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate the tool. Each employee will carry his/her training certification card.
- The tool shall be tested each day before loading to see if safety devices are in proper working conditions. Testing shall be in accordance with the manufacturer's recommended procedure.
- If a tool is found in improper working order or develops a defect during use, it shall be immediately removed from service and not used again until properly repaired.
- Tools shall not be loaded until just prior to the intended firing time. Neither loaded nor empty tools are to be pointed at any employee. Hands shall be kept clear of the open barrel end.
- Face shields and safety glasses or goggles should be used by employees during the firing of the powder-actuated tool.
- Loaded tools shall not be left unattended.
- Driving into materials easily penetrated shall be avoided unless a substance that will prevent the pin or fastener from passing completely through and creating a flying missile hazard on the other side backs such materials.
- Tools shall not be used in an explosive or flammable atmosphere.
- All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.

Abrasive Wheels & Tools

- **Power**
  - All grinding machines shall be supplied with sufficient power to maintain the spindle speed at safe levels under all conditions or normal operation.
- **Use of Abrasive Wheels**
  - Floor stand and bench-mounted abrasive wheels used for external grinding shall be provided with safety guards (protection hoods).
  - All abrasive wheels shall be closely inspected before mounting to ensure that they are free from cracks or defects.
  - Grinding wheels shall fit freely on the spindle and shall not be forced on. The spindle nut shall be tightened only enough to hold the wheel in place.
  - All employees using abrasive wheels, whether portable, bench, or floor-mounted, shall be protected by approved eye and face protection equipment.

Woodworking Tools

- All fixed, electrically powered woodworking tools shall be provided with a disconnection switch that can be locked and tagged in the "OFF" position.
- All portable, power-driven circular saws shall be equipped with guards above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base of the tilted for bevel cuts. The lower guards shall cover the saw to the depth of the teeth, except for the minimum arc required to allow proper retraction and contract with the work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.

Trenching, Excavation and Pier Holes

General

All contractors performing trenching, excavation or pier hole drilling must provide a site safety plan that protects employees and other contractors from exposure to excavation or drilling hazards.

For the purposes of definition all trenches will be considered as excavations (but the reverse is not always true for all OSHA standards). On any project where excavations are planned, an engineered excavation protection plan may be on file at the jobsite and followed for all excavations. Exceptions will be where the excavation can follow the OSHA guidelines under regular 29 CFR 1926.650 through 1926.653 or tabulated from tables or charts approved by a professional engineer.

Underground Utilities

Underground installations such as sewer, water, telephone, gas, fuel, and electrical utilities will be located prior to any excavation work. Use the One Call to Dig System. When utility companies fail to respond within 48 hours to a request to locate underground utility installations or cannot establish the exact location of these installations, the excavation can proceed with caution. These installations will be protected, supported, or removed as necessary to safeguard all employees.

Access to Excavations

Access will be provided to all excavations 4 ft or deeper through the use of ramps, ladders, or stairs. Ladders will be placed such that employees will not have to travel more than 25 ft to the nearest ladder.

Vehicle Traffic

All employees exposed to vehicle traffic will be required to wear warning vests that are of high visibility material.

Equipment Hazards

No employee will be permitted underneath loads handled by lifting or digging equipment. When mobile equipment is operated adjacent to an excavation or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system will be utilized. Barricades, hand/mechanical signals, or stop logs may be used for this purpose.

Hazardous Atmospheres

Where hazardous atmospheres may exist in an excavation greater than 4 ft, the atmosphere shall be tested before employees enter the excavation. Adequate precaution shall be taken or provide ventilation to prevent exposure in atmospheres of less than 19.5% oxygen or other hazardous substances and atmospheres having in excess of 10% of the lower explosive limit of the gas. Testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.

Since any excavation may also be considered a confined space, confined space entry procedures shall be in place and observed.

Water Accumulation

No employee will be allowed to work where accumulated water exist unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation, i.e. support or shield systems to protect from cave-ins, water removal to control incoming water, or use of a safety harness and lifelines. Water removing equipment will be monitored by the competent person to ensure proper operation. Excavations subject to water runoff from heavy rains will require inspection by the competent person after each rain.

Stability of Adjacent Structures

Adjoining buildings, wall, or other structures where the excavation operation endangers personnel and equipment, support systems will be incorporated. Shoring, bracing, or underpinning shall be provided to stabilize the structures.

Excavation below the level of the base or footing of any foundation or retaining wall shall not be permitted unless:

- A support system is provided for stability and protection of employees.
- Excavation is in stable rock.
- A registered professional engineer has approved the determination that such excavation work will not pose a hazard.
- A registered professional engineer has determined that the structure is sufficiently removed from excavation so as to be unaffected by the excavation activity.

Sidewalks, pavements, and any other structure shall not be undermined unless a support system or method of protection is provided to protect it from collapse. All surface encumbrances are to be supported or removed to eliminate any potential hazard.

Loose Soil or Rock

Adequate protection will be provided to retain any loose rock or soil, which could fall on an employee. Soil from the excavation will be stored at a minimum of 2 ft from the edge of the excavation, or a retaining system will be erected to contain the soil.

Inspections

The competent person will make daily inspections of excavations, the adjacent area, and protection systems for evidence of possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. Inspections will be done before work begins each shift, after any storm, or after other hazard-increasing occurrences. Where evidence of a situation exists where a cave-in, failure of equipment, or hazardous atmosphere may occur, the necessary precaution will be taken. Documentation of the inspection of the excavation is required.

Pier Holes

During drilling operations all pier holes must be barricaded with guardrails or workers must use 100% fall protection when within 10 feet of the open pier hole.

3-sided guardrails are allowed during drilling, however, if employees or workers access the unprotected side of the guardrail they must use 100% fall protection.

After drilling all guardrails around piers must be closed to provide complete protection around hole until hole after it is filled.

Fall protection at or near trenches must be provided by the subcontractor to protect employee from falls greater than 6'. Subcontractors must provide anchor point for personnel fall arrest equipment for employees exposed to open pier in place of guardrail.

Covers, when used, must be secured and when removed, be able to be removed without exposing employees to the open pier hole when removed. All covers must be secured, painted with high visibility paint or be marked with the word "HOLE" written in English and Spanish

Fall Protection

Where employees or equipment are required or permitted to cross over excavations, walkways, or bridges with standard guardrails will be erected. Adequate physical barrier protection will be provided at all remotely located excavations. All operations, when completed, will be backfilled as soon as possible.

Employee Protection Systems

Employees will be protected from cave-ins by of the following conditions:

- The excavation is in stable rock.
- Excavations that are less than 5 ft in depth and an examination of the ground by the competent person revised no potential cave-in.
- A protective system is designed to support the anticipated load capabilities without failure.
- Benching or sloping of the ground is incorporated for the various types of soil based on the OSHA standards for Type A, B, and C soils.
- Other benching, sloping, or support systems may be utilized if a registered professional engineer designs them.
- All excavations over 20 ft in depth will be required to be designed by a Registered Professional Engineer.
- Manufactured support systems, or shield systems can be used if they are designed and built to the manufacturer's specifications and the equipment is not modified in any way.
- All protective systems will be erected such that employees will be protected at all times. Removal of shoring equipment shall be from the bottom up and the inverse for installation. Backfilling will progress as the support systems are removed.

Welding and Cutting

Welding and Cutting are two integral parts of most projects. They are also the most common ignition source for construction fires.

The following general guidelines should be adhered to:

1. Subcontractor will provide additional fire protection.
2. All cylinders must be in an approved carrier or stand.
3. All cylinders will be stored according to OSHA guidelines. Any cylinder found improperly stored will be removed at the Subcontractor's expense.
4. Oxygen and fuel gas cylinders shall not be stored together, including bottles in carts unless they are separated by at least twenty (20) feet or by a five (5) foot tall, thirty (30) minute fire barrier.
5. Perform cutting and welding in designated safe areas whenever possible.
6. Fire retardant floor covering must be placed to catch slag and debris.
7. Combustibles should be moved or covered with a welding blanket to prevent ignition. All floor and wall openings should be covered.
8. No cutting or welding should be done within 50 feet of flammable liquids.
9. A fire watch, equipped with an approved extinguisher (minimal rating 2A:10 BC) or a charged hose, will be posted during and up to 30 minutes after the welding or cutting operation.
10. At times it may be required or necessary to issue a Hot Work "Flame" Permit. Hot work permits should be issued when work with an open flame or torch is required is an occupied building, substantially complete building, in areas that an open flame may cause damage or as required by the client. The Hot Work Permit is issued by the superintendent and requires the person doing the "flame work" to comply with additional safe guards. A suitable fire extinguisher or other fire control devices must be ready for instant use in any location where welding is done. Where welding must be carried on near combustible materials, a helper or other extra person should be on hand to guard against fire.

Visitors

Anyone visiting a BROADDUS Project site who is not an employee of BROADDUS CONSTRUCTION, or an employee of a subcontractor with a signed contract specific to the project site must check-in with the BROADDUS Project Management Team prior to accessing the construction area. Each visitor is required to sign the Indemnification Agreement for Visitor Access prior to entering the construction area. If a person refuses to sign the indemnification agreement for visitor access they are prohibited from entering the construction activity area.

Appendix A: Supplemental Attachments

A. Activity Hazard Analysis
B. Competent Person Acknowledgement
C. Crane Lift and Rigging Plan
D. Energized Electrical Work Permit
E. Equipment Inspection
F. Fall Hazard Assessment
G. First Report of Incident or Injury
H. Open Flame Hot Work Permit
I. Safety Orientation
J. Subcontractor Pre-Start Meeting
K. Subcontractor Training Verification
L. Task Hazard Analysis
M. Violation and Disciplinary Action
N. Visitor Release