SAFETY MANUAL

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INTRODUCTION

Welcome to the Taylor Davis Landscape & Construction Safety Manual. Our commitment to the well-being of our employees and strict adherence to state and federal safety regulations is of paramount importance. This manual is designed to serve as a comprehensive guide to understanding the fundamental principles of safety within our organization and the legal responsibilities that come with it.

The primary purpose of this Safety Manual is twofold. First, it is to ensure the safety and well-being of all our employees, subcontractors, and visitors. Second, it is to establish and maintain compliance with relevant state and federal laws governing workplace safety. In this manual, you will find information on general safety guidelines that apply across our organization, as well as details on how site-specific safety plans can be requested. To obtain site-specific safety plans, please reach out to the Safety Manager or Project Manager. By following the guidelines outlined in this manual, we can collectively create a safer and more compliant work environment, further enhancing our reputation for excellence in the landscape and construction industry. Your safety is our priority, and we thank you for your dedication to upholding these standards.

Thank you,

Taylor Davis Landscape & Construction

TAYLOR DAVIS LANDSCAPE COMPANY SAFETY POLICY

OBJECTIVE

The Safety Policy of Taylor Davis Landscape Company Inc. is designed to comply with the Standards of the Occupational Safety and Health Administration, and to endeavor to maintain a safe and injury/illness free workplace. A copy of the OSHA Safety and Health Standards 1926 and 1910 are available for all employees use and reference. These Standards shall be available in the home office at all times and will be sent to the jobsite on request. Compliance with the following Safety Policy and all items contained therein is mandatory for all employees of the company. The authorization and responsibility for enforcement has been given primarily to the Company Safety Manager . The Project Supervisor(s) share in this responsibility as well.

POLICY

It is company policy that accident prevention be a prime concern of all employees. This includes the safety and well being of our employees, subcontractors, and customers, as well as the prevention of wasteful, inefficient operations, and damage to property and equipment.

APPLICABILITY

This Safety Policy applies to all employees of Taylor Davis Landscape Company Inc. , regardless of position within the company. The Safety Rules contained herein apply to all subcontractors and anyone who is on a company project site. Every employee is expected to comply with the Safety Policy, as well as OSHA Health and Safety Standards.

IMPLEMENTATION

This Safety Policy supports six fundamental means of maximum employee involvement:

- Management commitment to safety.
- Weekly tool box safety meetings at all jobsites.
- Effective job safety training for all categories of employees.
- Job hazard analysis provided to all employees.
- Audio and/or visual safety presentations given at jobsites by Company Safety Manager .
- Various incentive awards for exemplary safety performance.

The Company Safety Managers will meet at least once a month to evaluate all areas of safety and make recommendations to the company president.

ADMINISTRATION

The Safety Policy will be carried out according to guidelines established and published in this and other related procedures. Specific instructions and assistance will be provided by Company Safety Manager as requested. Each supervisor will be responsible for meeting all of the requirements of the Safety Policy, and for maintaining an effective accident prevention effort within his or her area of responsibility. Each supervisor must also ensure that all accidents are thoroughly investigated and reported to Company Safety Manager(s) on the same day of the occurrence.

REPORTING OF INJURIES

All employees will be held accountable for filling out a "Notice of Injury Form" immediately after an injury occurs, even if medical treatment is not required. (Notice must be made at or near the time of the injury and on the same day of the injury.) Employees must report the injury to their supervisor.
A casual mentioning of the injury will not be sufficient. Employees must let their supervisor know:

- How they think they hurt themselves.
- What they were doing at the time.
- Who they were working with at the time.
- When and where it happened.
- Other pertinent information that will aid in the investigation of the incident

Failure to report an injury immediately (meaning at or near the time of the injury and on the same day of the injury) is a violation of the Safety Policy, and may result in immediate termination, in accordance with company policy.

NOTIFICATIONS

IN CASE OF SERIOUS INJURY OR DEATH

After the injured has been taken to the hospital, the leadman/foreman/supervisor shall notify the main office and Company Safety Manager(s) as soon as possible. Statements from witnesses shall be taken. Statements are to be signed by witnesses and should include the time and date. Photographs of the area where the incident occurred and any other relevant items are to be taken. Company Safety Manager will assist in the investigation. The completed accident report form will be sent to the main office.

In Case of Inspection by OSHA Inspector The leadman/foreman/supervisor must notify Company Safety Manager(s) that an OSHA Inspector is on the jobsite. It is the responsibility of all employees to make the inspector's visit on the jobsite as pleasant and timely as possible.

BASIC SAFETY RULES

Compliance with applicable federal, state, county, city, client, and company safety rules and regulations is a condition of employment.

All injuries, regardless of how minor, must be reported to your supervisor and the Safety Office immediately. An employee who fails to fill out a "Notice Of Injury Form" and send it to the Safety Office can be issued a safety violation notice and may be subject to termination, in accordance with company policy. In the event of an accident involving personal injury or damage to property, all persons involved in any way will be required to submit to drug testing.

HARD HATS

Will be worn by all employees on the project site at all times. The bill of the hard hat will be worn in front at all times. Alterations or modifications of the hat or liner are prohibited. Crane operators, when in an enclosed cab, have the option of not wearing a hard hat due to the possible obstruction of view.

SAFETY GLASSES

Will be worn as the minimum-required eye protection at all times. Additional eye and face protection such as mono-goggles and face shields are required for such operations as grinding, jack hammering, utilizing compressed air or handling chemicals, acids and caustics. Burning goggles for cutting, burning or brazing and welding hoods for welding, etc., are required.

FALL PROTECTION REQUIREMENTS

Full body harnesses and lanyards shall be worn and secured any time there is a fall hazard of more than six (6) feet. Lifelines shall be erected to provide fall protection where work is required in areas where permanent protection is not in place. Horizontal lifelines shall be a minimum of 2-inch diameter wire rope. Vertical lifelines shall be 3/4 inch manila rope or equivalent and shall be used in conjunction with an[7] approved rope grab.

Structural steel erectors are required to "hook up" with full body harness and lanyard.

Employees using lanyards to access the work or position themselves on a wall or column, etc., must use an additional safety lanyard for fall protection.

Manlifts must be used properly. As soon as an employee enters an articulating boom lift and before the lift is started, the employee must put on the harness and attach the lanyard to the lift. Employees are not required to wear harnesses on scissor lifts.

CLOTHING

Must provide adequate protection to the body. Shirts must have at least a tee sleeve. Shirts with sleeves and long pants will be worn at all times. No shorts are to be worn on projects. All employees, except welders and burners, must tuck shirt tails inside trousers. Burners and welders will not be permitted to wear polyester or nylon clothing. Sturdy work boots with rigid, slip resistant soles are required. No clogs, tennis shoes or loafers are permitted. Steel-toed tennis shoes with the ANSI label are the only alternative to the leather work boot. All

personnel will be required to attend safety meetings as stipulated by project requirements in order to meet OSHA Safety Standards.

Firearms, alcoholic beverages or illegal drugs are not allowed on company property or in company vehicles at any time. When drugs are prescribed by a physician, the Company Safety Manager must be informed. The use or possession of illegal drugs or alcoholic beverages on the jobsite will result in immediate termination.

Housekeeping shall be an integral part of every job. Supervisors\foremen\leadmen and employees are responsible for keeping their work areas clean and hazard-free. Clean up is required when a job is finished at the end of the day.

Burning and cutting equipment shall be checked daily before being used.

Flash back arresters shall be installed at the regulators on both oxygen and LP bottles.

All gas shall be shut off and hoses disconnected from bottles and manifolds at the end of the work day. Caps shall be replaced on bottles when gauges are removed.

When gauges are removed and caps replaced, the oxygen and LP bottles shall be separated into storage areas no less than 20 feet apart with a "No Fire or Smoking" sign posted and a fire extinguisher readily available.

Makeshift field repairs will not be allowed.

Drinking water containers are to be used for drinking water and ice only. Tampering with or placing items such as drinks in the water cooler will result in immediate termination. The "common drinking cup" is not allowed. Only disposable cups will be used.

All tools whether company or personal, must be in good working condition. Defective tools will not be used. Examples of defective tools include chisels with 8 mushroomed heads, hammers with loose or split handles, guards missing on saws or grinders, etc.

All extension cords, drop cords, and electrical tools shall be checked, properly grounded with ground fault interrupters (GFI's), and color-coded by a designated competent person each month. This shall be
apart of the assured grounding program. Cords and equipment that do not meet requirements shall be immediately tagged and removed from service until repairs have been made.

"Horseplay" on the jobsite is strictly prohibited.
Running on the jobsite is allowed only in extreme emergencies.

Glass containers or bottles of any kind are not permitted on jobsites or in company vehicles.

The jobsite speed limit is 10 MPH. No employee is permitted to ride in the bed of a truck standing up or sitting on the outside edges of a truck. Employees must be sitting down inside

the truck or truck bed when the vehicle is in motion. Riding as a passenger on equipment is prohibited unless the equipment has the safe capacity for transporting personnel.

Adequate precautions must be taken to protect employees and equipment from hot work such as welding or burning. Fire extinguishing equipment shall be no further than 50 feet away from all hot work. Used fire extinguishers must be returned to (Company Safety Manager) to be recharged immediately. Use of welding blinds is required in high traffic areas. All scaffolding and work platforms must be built and maintained in accordance with 0SHA specifications. All ladders must be in safe condition without broken rungs or split side rails. Damaged ladders shall be removed from service. Ladders shall be secured at the top and bottom and extend three (3) feet past the working surface. Metal ladders around electrical work are prohibited. A step ladder shall never be used as an extension ladder. A step ladder must only be used when fully opened with braces locked.

Crowfoot connections on air hoses shall be wired to prevent accidental disconnection. Compressed air shall not be used to dust off hands, face or clothing.

Report all unsafe conditions and near accidents to Company Safety Manager so corrective action can be taken.

All floor openings or excavations shall be barricaded on all sides to ensure employees are aware of the hazards. Floor holes shall be covered, with the covers secured and clearly marked.

Warning signs, barricades, and tags will be used to the fullest extent and shall be obeyed.

SCAFFOLD TAG SYSTEM

Green tags are to be placed on 100 percent complete scaffolds with all braces, locks and hand, mid, and toe rails in place before use.
Yellow tags indicate incomplete scaffolds. If scaffold is missing a hand, mid, or toe board, it must have a yellow tag and employees on it must be tied off at all times.
Red tags indicate scaffolds that are in the process of either being erected or disassembled. These scaffolds are not to be used at any time.
Scaffold tags should be placed in a highly visible location on the scaffolds for all employees to see.

All OSHA Safety Standards will be followed for job processes requiring respiratory protection.
*SEE RESPIRATORY PROTECTION PROGRAM.

All OSHA Safety Standards will be followed during excavation.
*SEE EXCAVATION PROGRAM

All OSHA Safety Standards concerning confined space entry will be followed.
*SEE CONFINED SPACE PROGRAM.

All OSHA Safety Standards concerning lockout/tagout of energized equipment will be followed.
*SEE LOCKOUT/TAGOUT PROGRAM

All OSHA Safety Standards will be followed for job processes requiring fall protection.
*SEE FALL PROTECTION PROGRAM. *These sample written programs can be downloaded from the Frankenmuth Safety Services Website.

ENFORCEMENT OF SAFETY POLICY
Safety violation notice(s) shall be issued to any employee, subcontractor, or anyone on the jobsite violating the safety rules or regulations by the Company Safety Manager .

Any violation of safety rules can result in suspension or immediate termination.

Any employee receiving three (3) written general violations within a six (6) month period shall be terminated.

Issuance of a safety violation notice for failure to use fall protection or for failure to report a job injury (at the time of the injury) may result in immediate termination, in accordance with company policy. It is understood that Taylor Davis Landscape Company Inc. is not restricting itself to the above rules and regulations. Additional rules and regulations as dictated by the job will be issued and posted as needed.

HAZARD COMMUNICATIONS PROGRAM

This program has been prepared to comply with the requirements of the Federal OSHA standard 1926.59
and to ensure that information necessary for the safe use, handling and storage of hazardous chemicals is
provided to and made available to employees.

This program includes guidelines on identification of chemical hazards and the preparation and proper use of
container labels, placards and other types of warning devices.

CHEMICAL INVENTORY

Taylor Davis Landscape & Construction maintains an inventory of all known chemicals in use on the worksite. A chemical inventory list is available from the warehouse manager.

Hazardous chemicals brought onto the worksite by Taylor Davis Landscape & Construction will be included on the hazardous chemical inventory list.

CONTAINER LABELING

All chemicals onsite will be stored in their original or approved containers with a proper label attached, except small quantities for immediate use. Any container not properly labeled should be given to the warehouse manager for labeling or proper disposal.

Workers may dispense chemicals from original containers only in small quantities intended for immediate use. Any chemical left after work is completed must be returned to the original container or the warehouse manager for proper handling.

No unmarked containers of any size are to be left unattended in the work area.

Taylor Davis Landscape & Construction will rely on manufacturer applied labels whenever possible and will ensure these labels are maintained. Containers that are not labeled, or on which the manufacturer's label has been removed, will be relabeled.

Taylor Davis Landscape & Construction will ensure that each container is labeled with the identity of the hazardous chemical contained and any appropriate hazard warnings.

SAFETY DATA SHEETS (SDS)

SDS are obtained for all chemicals and kept in electronic form and are available upon request. Employees working with a hazardous chemical may request a copy of the safety data sheet (SDS). Requests for SDS's should be made to the warehouse manager.
SDS's should be available and standard chemical reference may also be available onsite to provide immediate reference to chemical safety information. An emergency procedure to gain access to SDS's will be established.

EMPLOYEE TRAINING

Employees will be trained to work safely with hazardous chemicals. Employee training will include:

- Methods that may be used to detect the release of hazardous chemical(s) in the workplace,
- Physical and health hazards associated with chemicals,
- Protective measures to be taken, Safe work practices, emergency responses and use of personal protective equipment, and Information on the Hazard Communication Standard, including labeling and warning systems, and an explanation of Safety Data Sheets.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Required PPE is available from the warehouse manager. Any employee found in violation of PPE requirements may be subject to disciplinary actions, up to and including discharge.

EMERGENCY RESPONSE

Any incident of over exposure or spill of a hazardous chemical/substance must be reported to the safety director. The foreman, or immediate supervisor, will be responsible for ensuring proper emergency response actions are taken in leak/spill situations.

HAZARDS OF NON-ROUTINE TASKS

Supervisors will inform employees of any special tasks that may arise which would involve possible exposure to hazardous chemicals. Review of safe work procedures and use of required PPE will be conducted prior to the start of such tasks. Where necessary, areas will be posted to indicate the nature of the hazard involved.

INFORMING OTHER EMPLOYEES

Other onsite employees are required to adhere to the provisions of the Hazard Communication Standard. Information on hazardous chemicals known to be present will be exchanged with other employers. Employers will be responsible for providing necessary information to their employees. Other onsite employers will be provided with a copy of Taylor Davis Landscape & Construction hazard communication program.

POSTING

Taylor Davis Landscape & Construction has posted information for employees on the hazard communication standard. This information can be found on the bulletin board in the warehouse lunch room.

THE HAZARD COMMUNICATIONS STANDARD

The purpose of this standard is to make sure information on working safely with hazardous chemicals on the project site is given to workers.

The standard requires manufacturers and distributors of chemicals to properly label chemical containers and to provide Safety Data Sheets to users of their products.

Employers must have a written hazard communication program, a chemical inventory list for each project site, train workers on proper chemical usage and make information available on the chemicals and use in their workplaces.

Employers must provide training to workers in the provision of the hazard communication standard, physical and chemical properties of chemicals in use, protective measures for workers in using these chemicals in normal and non-routine tasks and appropriate personal protective equipment, safe work procedures and first aid measures. This training must be provided initially and when new chemical hazards are brought into the workplace.

The employers must ensure that all chemical containers are labeled and train employees on the labeling, hazardous warning and monitoring (if any) systems in use onsite.

Employees have the right to review the written hazard communication program and chemical list for their site. Employees can also request a copy of the Safety Data Sheet for any chemical they are using.

Working safely with chemicals is a two-way street. Taylor Davis Landscape & Construction will provide access to the needed information, but it's up to each employee to handle chemicals safely, and to use the proper protective equipment and safe working procedures whenever working with chemicals.

CHEMICAL FACTS

In order for a chemical to have any effect, a person must come in contact with a chemical in its solid, liquid or gas form. There are four "routes of entry" or paths a chemical can take.

BREATHING/INHALATION

Chemicals can enter through the lungs. Some chemicals, ammonia for example, can irritate the lungs, nose and throat. Other chemicals can be absorbed into the blood, traveling to and affecting organs in the body. Prolonged exposure to hazardous substances like asbestos and other solid fiber materials can cause serious health problems.

Dusts and fibers can become trapped in the lungs causing irritation, scarring and damage. Regardless of the type of chemical an employee works with, the first line of defense against breathing in hazardous chemicals is to use an approved respirator.

Other chemicals can be absorbed into the blood, traveling to and affecting organs in the body. Prolonged exposure to hazardous substances like asbestos and other solid fiber materials can cause serious health problems. Dusts and fibers can become trapped in the lungs causing irritation, scarring and damage. Regardless of the type of chemical an

employee works with, the first line of defense against breathing in hazardous chemicals is to use an approved respirator.

SKIN/ABSORPTION

Although the skin is a very effective barrier to most chemicals, it can be penetrated. Damage to the skin from cuts, scrapes, cracking, dryness or other conditions can allow a chemical to enter into the body. Some chemicals can damage the skin on contact, and others pass through the skin and into the bloodstream. A group of chemical solvents, such as toluene, gasoline and mineral spirits, are absorbed easily through the skin. Some pesticides, like parathion, can easily pass through the skin, building up to poisonous levels in the body.

There are two easy steps to prevent absorption

1. wearing gloves that are chemical resistant and washing off any chemical contact from the skin as soon as possible.
2. When washing, make sure to use a product designed for washing skin and not products like paint thinner, turpentine or benzene.

SWALLOWING/INGESTING

A chemical can enter the body if accidentally swallowed or if food or drink become contaminated. Hand washing after working with chemicals will reduce the risk. Wash hands prior to eating, smoking or drinking in an area where chemicals are in use.

INJECTION

Like a shot received from a doctor when ill, chemicals can be accidentally injected into the body. If working around high pressure equipment of any kind, like compressed air, grease guns or hydraulic lines, the potential exists for this kind of accident.

Be cautious around any kind of pressurized spray equipment or high pressure lines, and never use compressed air to clean off hands, arms or clothing.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 42: Hazard Communication

USING AN SDS (SAFETY DATA SHEET):

An SDS provides information the manufacturer of a chemical considers necessary and what steps employees should take to protect themselves when using the product.

Although SDS's from different sources may look very different, they all contain the same type of information. SDS's contain a lot of technical language and data, but the information needed to identify, understand and work safely with a chemical product is fairly easy to find.

SDS's are divided into sections usually beginning with the chemical and common name of the product. Besides knowing what the product is called, it's important to know who makes it and where to reach the manufacturer. The manufacturer can answer questions about the product and help if an emergency arises. The manufacturer's phone number is found in Section 1. An important section to look for is Section 3, "Health Hazards". This section informs on the product hazards, the type of danger it represents and what happens if overexposure occurs.

Equally important is Section 4, "First Aid." This section gives basic steps to take if a person is affected by the chemicals in this product.

Section 8 deals with "Protective Equipment." Here, specific recommendations for safety equipment and procedures are listed. This section tells employees how to protect themselves from exposure when working with, or near, this product.

By taking the time to read the SDS, employees will find important, basic information about the chemical(s) they work with, including:

- What it is called
- What is in it
- What happens if chemical exposure occurs
- What first aid steps to take if exposure occurs
- How to protect employees and work safely with the chemical

Other sections of a SDS inform on what the chemical looks, smells and feels like, how to safely handle and store the chemical, what happens to the chemical in the event of a fire and what, if any, exposure limits have been set or recommended for the chemical(s) or product.

More information on SDS, chemical information references and chemical safety can be obtained by asking a company supervisor.

Under the provisions of the hazard communication standard, employees have the opportunity to review the company's Hazard Communication Standard, chemical inventory list and copies of SDS's for chemicals they are working with.

SOLVENTS

A solvent, in simple language, is a liquid that dissolves another substance. In construction, they are most often used as cleaners, degreasers, thinners, fuels and glues

Solvents are lumped into three main classes. Those containing water (aqueous solutions) like liquid forms of acids, alkalies and detergents; those containing carbon (organic solvents) like acetone, toluene and gasoline and those containing chlorine (chlorinated solvents) like methylene-chloride and trichloroethane.

Solvents can enter into the body in two ways;

1. by inhalation
2. by contact with skin.

Any solvent that is breathed in (inhalation) can cause dizziness or headache as it affects the central nervous system. If continued inhalation occurs, the vapors of a solvent can damage the nose, throat, eyes and lungs. More severe irritation, such as damage to the liver, blood, kidneys and digestive system can occur.

Solvents can be directly absorbed through contact with skin. Because solvents dissolve oils and greases, contact with skin can dry it out, producing irritation, cracking and skin rashes. Once a solvent penetrates the skin, it enters the bloodstream and can attack the central nervous system and organs.

Like all chemicals, the affect on the body will depend on a number of factors -- how toxic it is, length of exposure, body sensitivity and how concentrated or strong the solvent is.

Following a few simple procedures will protect against solvent exposure:

- Determine the chemical type, name and CAS number.
- Use protective equipment such as gloves, safety glasses and proper respirators recommended for that chemical.
- Make sure the work area has plenty of fresh air.
- Avoid skin contact with solvents.
- Wash with plenty of soap and water if a solvent comes in contact with the skin.
- If a solvent splashes into an eye, flush with running water for a minimum of 15 minutes. Seek medical help.

Additional information on chemicals in the workplace is available from a company supervisor.

ACIDS, BASES AND ALKALI

Acids and bases (caustics) can easily damage skin and eyes. Severity of the damage depends on how strong the chemical is, how long contact is maintained and what actions are taken following contact.

Acids and bases can be liquids, solid granules, powders, vapors or gases. A few commonly used acids include sulfuric acid, hydrochloric acid, muriatic acid and nitric acid. Some commonly used bases (caustics) include lye (sodium hydroxide) and potash (potassium hydroxide).

Acids and bases can be corrosive, causing damage to whatever they come in contact with. The more concentrated the chemical, the more dangerous it may be. Vinegar is a mild form of acetic acid and as such, can be swallowed or come into contact with the skin with no damage, but a concentrated solution of acetic acid can cause serious burns.

Various acids react differently when they come in contact with the skin. When mixed with water, sulfuric acid produces heat; if it comes into contact with the skin it reacts with moisture causing burns.

Irritation from hydrofluoric acid may not be immediately noticed if it spills on the skin, but hours later, as the acid is absorbed into the muscle tissue, it can cause deep burns that are very painful.

Most acids, in a gas or vapor form when inhaled, react with moisture in the nose and throat, causing irritation or damage. Acetic and nitric acids don't react with water, so when these vapors are breathed in, they quickly penetrate into the lungs, causing serious damage.

BASES

Bases as a class of chemicals that feel slippery or soapy. In fact, soap is made from a mixture of a base (lye) and animal fat. Concentrated bases dissolve tissue easily and therefore can cause severe skin damage on contact. Concentrated caustic gases like ammonia vapors can damage the skin, eyes, nose, mouth and lungs. Even dry powder forms of bases can cause damage if inhaled because of their reaction with the moisture in skin, eyes and respiratory tract.

Cement and mortar are alkali compounds in their wet or dry forms. As dust and powder, they can cause damage to skin and eyes when they react with moisture in the body. Concrete and mortar can cause allergic reactions in people who become sensitive to them. These compounds are abrasive and can damage skin by the sandpaper-like quality they possess.

Following a few simple procedures will protect against acid and base exposure:

- Identify chemicals being worked with and how concentrated they are.
- Use personal protective equipment, as required.
- In case of skin or eye contact, flush with cool water for at least 15 minutes. Do not rub the skin or eyes.
- Always add acid to water to prevent splatter.
- Keep acids and bases apart, store separately and clean up spills promptly.

METALS

Metals are not often considered when discussing chemicals, but the fact is that every time hot work and/or cutting is performed (welding, brazing, torch cut, solder, grinding, polishing, coating, finishing or drilling metals) dust, fumes and vapors that contain metal are being produced.

The metal in dust, fumes and vapors can easily be deposited in the lungs and blood stream. Although breathing in the dust or fume form of a metal is the most common way for metals to get into the body, swallowing metal particles or compounds is also common due to smoking, drinking, chewing gum or eating in an area where these compounds are present. Some metals (like mercury and certain compounds of lead) can be absorbed by the skin.

Common construction metals include:

CADMIUM

Cadmium and its compounds can be toxic. A condition called metal fume fever with flu-like symptoms (coughing, shortness of breath, fatigue, fever, chills, profuse sweating and chest pains) can occur when small doses are inhaled. In larger doses, cadmium inhalation can be fatal. Small repetitive doses can cause kidney damage or lead to emphysema. Welding cadmium coated metals is the most common cause of exposure. Adequate ventilation and an approved respirator will provide protection.

NICKEL

Exposure to metal dust or fumes containing nickel and nickel compounds can inflame and irritate the skin, causing an itchy rash. Inhalation of nickel compounds has been linked to cancer of the lungs and nasal sinuses.

LEAD

Lead exists normally in the body, but can easily build to a level that is toxic. Early signs of lead poisoning (fatigue, irritability, headache, cramps, stomach pain, loss of appetite) are likely to be ignored. Continual buildup can damage the nervous system, brain, kidneys and reproductive system. Soldering pipes, casting lead seals and piping repair are common lead producers, but lead is also found in gasoline, canned food and most city water supplies.

ZINC, COPPER, BRASS AND MAGNESIUM

Fumes, powders and compounds of these metals are sometimes encountered in welding, brazing, cutting and spray metalizing work. A condition called metal fume fever with flu- like symptoms (coughing, shortness of breath, fatigue, fever, chills, profuse sweating and chest pains) can occur when small doses are inhaled.

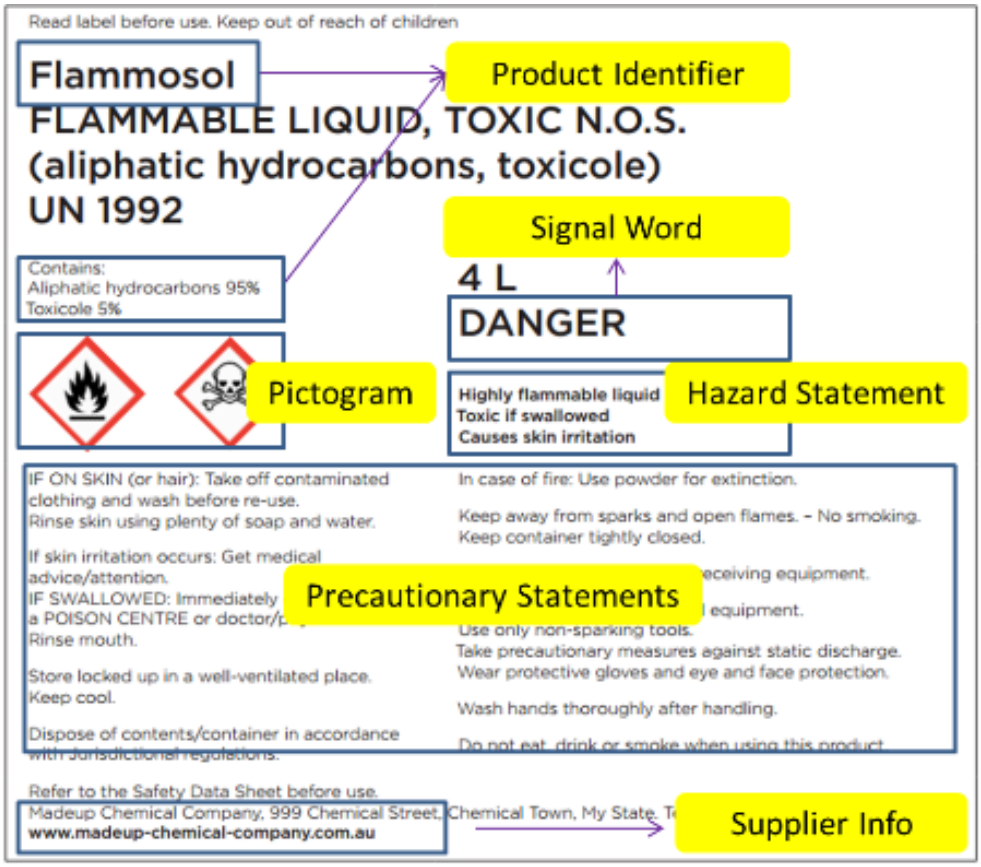
Following these simple procedures will protect against metal exposure.

- Know what is in the metal being used.
- When dust or fumes are produced, use the appropriate respirator.
- Work in a well ventilated area.
- Pay attention to personal hygiene and housekeeping. Wash hands before eating, drinking or smoking. Keep work areas separate from eating and break areas.

HAZARDOUS CHEMICAL AND MATERIAL LABEL

Look for this label (or a similar representation of the four-color square) as a guide to chemical and material hazards. Labels will be found on bottles, jugs, metal cans, barrels, etc. and identify the substance present, as well as indicate the severity or degree of health, fire and reactivity hazard(s).

Hazardous Placard Colors



FLEET POLICY

Taylor Davis Landscape & Construction recognizes that our employees are our most valuable assets and the most important contributors to our continued growth and success. Our company is firmly committed to the safety of our employees. TLC will do everything possible to prevent workplace accidents and is committed to providing a safe working environment for all employees.

Traffic related motor vehicle accidents are the leading cause of work-related fatalities. The environment in which these accidents occur involves numerous complex factors.

The purpose of TLC's Fleet Safety Policy is to provide the means to reduce such factors to eliminate unnecessary injuries and fatal circumstances. We value our employees as human beings crucial to the success of their families, the local community and Taylor Davis Landscape & Construction

RECRUITMENT, DRUG & ALCOHOL TESTING

TLC focuses its efforts on driver selection through a variety of resources.

Driver selection will be made upon completion of a formal interview and background check to include contacting references, review of the Motor Vehicle Regulations (MVR) and a negative drug screen. Initial, periodic random and accident drug/alcohol testing is mandatory.

Testing will be conducted by a licensed medical facility designated by TLC Initial positive results will be grounds for not hiring. The consequences of positive results in periodic random, accident or any other drug/alcohol testing are stated in our drug-free work policy.

MVRs will be requested upon initial hire date and periodically thereafter.

MVRs for CDL drivers will be requested a minimum of once per year. As a guideline, violations of the driver acceptability policy will be grounds for an unsatisfactory MVR, prohibiting hiring of a prospective employee, prohibiting driving of any vehicle for company use or possible termination and/or disciplinary actions of an active employee. Management reserves the right to use discretion in determining an unsatisfactory MVR.

JOB REQUIREMENTS

All prospective employees will be required to undergo a physical evaluation(s) and if required, pass a Department of Transportation physical evaluation. Results of the physical evaluation will be compared to the necessary physical requirements of the job to ensure the prospective employee is able to perform at the required level of physical exertion. Some vehicles require a Commercial Drivers License per regulatory agencies. Use of seat belts and other safety devices is mandatory.

PREVENTATIVE MAINTENANCE

To retain the safety and integrity of the vehicle, Taylor Davis Landscape & Construction will provide the necessary resources to ensure all vehicles are operating properly and safely. All routine motor vehicle maintenance will be done according to the manufacturer's specifications. Critical components that will be checked at each oil change are brakes, tires, suspension, steering, lights, mirrors, windows and windshield wipers. CDL drivers will inspect their vehicle each day of road use.

ACCIDENT INVESTIGATION PROCEDURES

Taylor Davis Landscape & Construction realizes some accidents are unpreventable. If necessary, drivers should seek medical attention immediately. Supervisors and drivers must be trained in post-accident procedures to secure the details of the accident and document the damage. Providing detailed facts of the accident will help our insurance carrier deter fraudulent third party insurance schemes. Drug/alcohol testing is mandatory the day of the accident.

All vehicles will be supplied with an accident claim form. Drivers are required to document all details of the accident like traffic flow, speed limits, stop lights/signs, weather conditions, citations issued, etc. Pictures should be taken to document the extent of damage to all vehicles involved.

Once this information is secured, the driver is to immediately report all accidents to his/her supervisor. If the vehicle is inoperable, arrangements need to be made for towing and delivery of cargo. Hazardous material operations, containment and clean-up will be coordinated by the supervisor and/or driver.

DRIVER ACCEPTABILITY POLICY

No one other than the owner(s) has the authority to make an exception to the below stated policy. Any exceptions are generally insured through a separate insurance policy with the additional cost shared by the employee.

A driver is considered unacceptable under the following circumstances prior to the date of the latest MVR:

- One or more Type 1 conviction(s) in the last five years,
- Three or more Type 2 convictions in the last three years,
- Two or more at-fault accidents in the last three years, or
- Any combination of Type 2 convictions and any type of accidents totaling three or more in the last three years.

TYPE 1 VIOLATIONS

- Driving while intoxicated, impaired or under the influence of alcohol or drugs,
- Failure to stop and report an accident (hit and run),
- Assault, manslaughter or homicide arising out of the operation of a motor vehicle,
- Driving while license is suspended or revoked,
- Reckless or careless driving,
- Speed contest, drag or highway racing,

- Using a motor vehicle for a commission of a felony,
- Operating a motor vehicle without owner's authority (grand theft),
- Permitting an unlicensed person to drive,
- Speeding 20 MPH or over the posted speed limit, or
- Any other conviction of a serious nature that shows a disregard to traffic safety.

TYPE 2 VIOLATIONS

- Speeding, less than 20 MPH over the posted speed limit,
- Driving too fast for conditions,
- Unsafe lane change,
- Following too closely,
- Failing to stop at a stop sign or traffic signal,
- Equipment violations,
- No license and/or proof of insurance in possession, or
- Any violation other than Type 1 violations.

PERSONAL USE OF COMPANY VEHICLES

The primary purpose of a company vehicle is to support the business of Taylor Davis Landscape & Construction. Personal use of the vehicle(s) is allowed by the employee. The employee's spouse is permitted to drive the vehicle in the event of an emergency, however, this is not encouraged. No other individuals are allowed to drive a company vehicle.

DRUG AND ALCOHOL POLICY

It is the desire of Taylor Davis Landscape & Construction to provide a drug-free, healthy and safe workplace. To promote this goal, employees are required to report to work in appropriate mental and physical condition to perform their jobs in a satisfactory manner.

While on Taylor Davis Landscape & Construction premises and while conducting business-related activities off of the Taylor Davis Landscape & Construction premises, no employee may use, possess, distribute, sell or be under the influence of alcohol or illegal drugs.

The legal use of prescribed drugs is permitted on the job only if it does not impair an employee's ability to perform the essential functions of the job effectively and in a safe manner that does not endanger themselves or others in the workplace.

Employees involved in an incident resulting in significant injury or property loss are required to take a blood test to screen for drug and alcohol use immediately following the incident. In cases where this is not practical because of personal injury, it will be done at the earliest possible time thereafter.

Violations of this policy may lead to disciplinary action, up to and including immediate termination of employment and/or required participation in a substance abuse rehabilitation or treatment program. Such violations may also have legal consequences.

Employees with questions or concerns about substance dependency or abuse are encouraged to discuss these matters with their supervisor or a Human Resources representative to receive assistance or referrals to appropriate resources in the community.

Employees with drug or alcohol problems that have not resulted in, and are not the immediate subject of, disciplinary action may request approval to take unpaid time off to participate in a rehabilitation or treatment program through Taylor Davis Landscape & Construction's health insurance benefit coverage. Leave may be granted if the employee agrees to abstain from use of the problem substance, abides by all Taylor Davis Landscape & Construction's policies, rules and prohibitions relating to conduct in the workplace, and if granting the leave will not cause Taylor Davis Landscape & Construction any undue hardship.

Under the Drug-Free Workplace Act, an employee who performs work for a government contract or grant must notify Taylor Davis Landscape & Construction's of a criminal conviction for drug-related activity occurring in the workplace. The report must be made within five days of the conviction.

Employees with questions on this policy or issues related to drug or alcohol use in the workplace should raise their concerns with their supervisor or a Human Resources representative without fear of reprisal.

HOW TO SUPERVISE FOR SAFETY

PLANNING

The supervisor must look ahead to anticipate potential hazards and take preventive measures. A site specific safety plan must be completed and filed for each construction site. He/she should be on the lookout for suggestions from both management and employees.

JOB INSTRUCTION

Job safety instruction is one of the most important parts of supervision. Personal, point-by-point demonstrations of the operation of machinery and tools are insurance that money cannot buy. Tell them, show them and keep showing them.

MORALE

Good morale and proper attitudes on the part of employees back up every safety effort, even when the supervisor is busy with other matters. The supervisor develops safety attitudes in employees so they will work safely, even in his/her absence.

PRODUCTION

Organizing the work makes productivity much easier. Safety is a big responsibility, and much of it can be broken down into manageable parts.

EFFICIENCY

An efficient operation has high output with low cost. Unsafe conditions or work methods require workers to pay less attention to production and more attention to working safely, making the operation that much less efficient. A safe operation is an efficient operation.

GOOD HOUSEKEEPING

The supervisor will maintain a safe site with good housekeeping only if he enlists the cooperation of all employees.

SAFE CONDITIONS

By discussing safety with employees, the supervisor will elicit cooperation, ideas and aid in making conditions safe and keeping them that way.

SAFETY ATTITUDE

One of the most difficult safety activities for the supervisor is the development and maintenance of a good safety attitude in all employees. This requires tact, psychology, teaching, selling, diplomacy, discipline and leadership. A worker without a good safety attitude is more likely to have an accident in an “accident proof” operation. A good supervisor learns all the angles of creating safety attitudes and uses them continually.

HOW TO SUPERVISE FOR BALANCE

A balanced program of morale building, training and leading by example on the part of the supervisor is superior to undue reliance on devices, mottos, committees or any single aspect of the program.

- The supervisor has a dual responsibility to management and employees alike. The supervisor must coordinate their efforts for safety and look to both groups for action, suggestions and resolution to complaints. He/she can make his/ her work much easier and effective by:
- Planning for safety,
- Conducting demonstrations of safe job practices,
- Establishing the proper attitude for safety,
- Organizing his/her own fact-finding efforts, cooperating with employee and supervisory committees,
- Regularly checking work conditions against safety standards,
- Being a good example by using safety precautions and equipment, and
- Keeping up with new developments in safety through the study of bulletins and publications on safety practices.

HOW SAFETY BENEFITS THE SUPERVISOR

Safety is a top recommendation. Safety is a great reference for a promotion to a new job. An employer knows the economic value of safety. Fellow workers respect a conscientious supervisor. Safety records reflect these positive qualities.

Safety is money in the bank. Safety means less down-time, smoother production, fewer claims, less damage and lower insurance rates. Because the employer makes more money with a safety-minded supervisor, a good supervisor has the potential to make more money as a direct result! The following is a list of qualities a good supervisor:

- Takes the initiative to tell management about ideas for safer layout of equipment, tools and processes, proactively takes care of equipment to keep it safe.
- Knows the value of machine guards and ensures that proper guards are provided and used, and takes pride in knowing how to use equipment safely, takes charge of operations that are not routine to make certain that safety precautions are determined and observed.
- Arranges for adequate storage and enforces good housekeeping knows what materials are hazardous and how to handle them safely, becomes an expert on waste disposal for good housekeeping and fire protection,
- Keeps his/her eyes open for any employee who may be a safer worker in another job/area of the company,
- Continues to "talk safety" with all employees, works with everyone under him/her without favoritism and encourages employees to work together, establishes good relations with union stewards and with the safety committee,
- Sets the example in safety uses judgment on when best to constructively criticize or offer praise, and knows the value of public praise, not only explains how to do a job, but demonstrates and observes to ensure it continues to be done safely.
- Studies the seemingly unimportant accidents and takes corrective measures,
- Keeps everyone informed of all safety policies, and knows what personal protective equipment is necessary on each job and sees that such equipment is used.

RESPONSIBILITY BY POSITION

SAFETY DIRECTOR

The safety director has the authority and responsibility for the complete maintenance of the EV Safety Program. He/ she is responsible for all accident prevention activities on the project site. He/she will maintain proper and complete records of all accidents, keep current with any changes or additions to federal, state or local rules governing accident prevention and safety, be responsible for employee training programs and monitor site supervision to ensure that the requirements of the Company Safety Policy are being fulfilled.

The safety director has the authority to stop any operation that is deemed unsafe or in violation of appropriate rules until corrective action has been carried out. The safety director will also advise management of willful, knowing and repeated violations of state, federal or local rules or the EV Safety Policy and will recommend to management suitable disciplinary action to be taken.

In the event a violation is alleged by a law enforcement agency and a citation against the company has been issued, the safety director will ensure that corrective action is taken within the prescribed time limit and that all reports to the appropriate enforcement agencies have been filed as mandated by law. The safety director will report to management on the corrective action taken.

In the event management believes that a contest should be filed against the citation or proposed penalty, the safety director is responsible for compiling any and all records, data and other information necessary to substantiate the company's claim against the citation or penalty. In addition, the safety director is responsible for the following accident prevention:

- Evaluate employee training programs,
- Review accident investigation reports,
- Establish a system for accident recording and reporting in accordance with the insuring company's requirements and other internal policies,
- Develop the effective use of safety publications and materials,
- Develop the effective use of interest stimulants to positively motivate employee attitude toward accident control efforts,
- Meet with the insuring company, when indicated, for the purpose of discussing services being provided, general safe working practices, recommendations for new policies and review of all accident trends and losses,
- Appoint a responsible person within the main office to be assigned the duty of making all claim reports to the insuring company,
- Assist supervisors in the development of effective controls when the need is indicated, and
- Advise management of progress in all phases of the safety efforts.

FIELD MANAGER

Field managers are responsible to management for all phases of accident control in the operations they direct.

It is the duty of each field manager to meet with the safety director to discuss safety policy, accident control and new means and methods for the prevention of accidents.

Field managers must attend all division safety meetings for crews under his/her jurisdiction and participate in the planning of the meeting when necessary.

Field managers must educate the foremen in his/her division on the Taylor Davis Landscape & Construction Safety Policy and safe working practices for the project.

The field managers must furnish all necessary information regarding any accident or claim to the safety director and the person responsible for reporting accidents to the insuring company.

FOREMEN

Foremen are responsible to field managers for all phases of the accident control efforts in the operations which they direct.

- Foremen are responsible at all times for safety as for any other part of operations.
- Foremen are at all times responsible for the safe execution of work and for the job performance of all employees under their supervision.
- Foremen will be held accountable for all accidents and employee actions, unless investigation shows they were due to conditions beyond his/her control.
- Foremen must instruct all new employees on the reporting of all accidents and the prompt receiving of first aid.
- Foremen are responsible for the training and instruction of new and transferred employees under their supervision.
- Foremen are responsible for the proper use of safety devices and equipment by the men/women under their supervision.
- Foremen are responsible for the regular inspection of all tools and equipment, including workers' personal tools used on the project site.
- Foremen must make certain that no work is assigned to any individual who is unqualified or incapable of performing the work safely.

The foremen, **before leaving a job**, must make certain that the project is in as safe a condition as possible. They must post adequate warning of any condition which might endanger other work personnel or members of the public.

FIELD PERSONNEL

All employees are required to abide by the requirements of federal, state and local safety laws and attending rules and regulations. Any hazardous conditions found on a project site must be reported promptly to the employee's immediate supervisor.

SAFETY MEETINGS

It is the duty of the immediate supervisor of all crews to schedule a weekly safety meeting/tool box talk for all employees under his/her supervision. It is the responsibility of the immediate supervisor to make certain that all employees attend these meetings (with the exception of those assigned to emergency duty).

During such meetings it is the duty of the immediate supervisor to instruct the employees on safe methods for the performance of their work, to discuss accident control methods and to advise the employees of new methods instituted to control the re-occurrence of previously reported accidents or injuries.

The employer will provide facilities and times for safety meetings on a regularly scheduled basis and will coordinate with the immediate supervisor to furnish materials for informative meetings.

FIRST AID

The number of persons, space and equipment assigned for first aid duty will vary with the size and location of each construction project. A small job of relatively short duration will have different requirements than a large job of longer duration or a project that may be in a remote area. Regardless of the job size and conditions, however, at least one person must be assigned first aid responsibilities and a certain minimum quantity of supplies will be stocked at the project site.

Taylor Davis Landscape & Construction must meet the emergency treatment requirements in the following manner:

- Assign at least one person per job responsible to render first aid.
- First aid providers must have a valid first aid certificate from the American Red Cross or equivalent agency, and must be available at the worksite to render first aid.
- Furnish first aid supplies to each job to cover the needs of the work force present.
- Instruct foremen on proper record keeping of each injury treated and each person sent to a doctor or hospital.
- Require follow-up by the immediate supervisor on each injury treated or referred to a doctor or hospital. The supervisor will report to the main office his findings regarding any developments not previously reported and/or of any suspected complications in the treatment.
- Prompt reporting to the main office by the immediate supervisor of all lost time accidents.

BLOODBORNE PATHOGEN AWARENESS BLOODBORNE DISEASES

Protection from bloodborne diseases requires knowing the facts, practicing good hygiene and taking a few sensible precautions. These are controllable measures. They are vitally important, so take them seriously.

HIV AND ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS, AN INCURABLE ILLNESS CAUSED BY HIV)

Life altering diseases, HIV is transmitted primarily through sexual contact, but may also be transmitted through contact with blood and other bodily fluids. Most people infected with HIV will develop AIDS and may become unable to fight infections and other diseases.

HBV

Hepatitis B Virus causes liver disease. HBV has the ability to severely damage the liver and can lead to cirrhosis and other liver disorders. HBV is a larger threat than AIDS because it is a more common bloodborne pathogen; unlike AIDS though, Hepatitis B can often be cured.

HIV AND HBV

People from all walks of life have HBV and HIV. It is not possible to tell who has HIV or HBV by looking at them. Many people may not even know that they are infected. People can carry either disease for many years while looking and feeling healthy. However, their blood and bodily fluids may be highly contagious and they may be unknowingly spreading the virus to others.

UNIVERSAL PRECAUTIONS

The only safe thing to do is use universal precautions. This means treating all blood or bodily fluids as potentially infectious.

WORKPLACE TRANSMISSION

In the workplace, bloodborne pathogens can be transmitted in blood, bodily fluids and unfixed tissues or organs (not including intact skin).

MEANS OF TRANSMISSION

The virus must first enter the body. A person can become infected by:

- Sexual contact with an infected partner,
- Sharing infected needles,
- Accidentally cutting the skin with a sharp object that is contaminated with infected blood or bodily fluids,
- Getting infected blood or bodily fluids on the skin, especially if the skin has open sores, nicks or cuts, or
- Getting contaminated blood or bodily fluids in the mucous membranes of the eyes, nose or mouth.

EMERGENCY ASSISTANCE

If an employee chooses to help an injured worker, focus on stopping the bleeding. Once the bleeding is under control, it is not necessary to give further assistance.

Be prepared:

- Know what to do before an emergency occurs,
- Wear protective gloves,
- Do NOT take unnecessary risks,

- Shut off machinery,
- Do whatever is necessary to save a life, but DO NOT touch blood or bodily fluids,
- DO NOT give unprotected mouth-to-mouth resuscitation,
- Stay with the injured person, and
- Wait for emergency professionals to arrive on the scene.

AFTER THE INCIDENT

If gloves, clothes or shoes become contaminated, remove them as soon as possible and place them in a sealed bag. Wash with non-abrasive soap and water. Decontaminate or dispose of contaminated items as regulated waste.

If you think you may have been exposed to blood or other potentially infectious material, do not panic. Report the incident immediately to your supervisor. Try to determine the source of the blood or bodily fluid with which you came in contact and get a sample if possible. Taylor Davis Landscape & Construction will advise about HBV vaccination, testing, counseling and any follow-up steps.

Professionals use special protective equipment. Even the goggles, gloves and dust masks used on the job can help keep blood and bodily fluids off of the skin and out of the eyes, nose and mouth.

A Hepatitis B vaccination series is made available to all employees with occupational exposure and is available at no cost after training, and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. Vaccination is encouraged unless:

- documentation exists that the employee has previously received the series
- antibody testing reveals that the employee is immune
- vaccination is contraindicated for medical reasons.

COMMON SENSE RULES

HAND WASHING

Be sure to wash hands and remove any protective clothing before eating, drinking, smoking, applying cosmetics or lip balm or handling contact lenses. Keep hands away from the face (especially the nose, mouth and eyes) while cleaning. Hand washing is one of the best defenses against spreading infection, including HBV and HIV. Always wash hands with non-abrasive soap and water at the end of the shift and after removing work gloves. If handwashing facilities are not available at a worksite, antiseptic hand cleanser with disposable towels or antiseptic towelettes will be provided.

CLEAN-UP

Safely taking care of the accident victim is just the start of removing infectious bloodborne diseases from the workplace. A hazardous situation remains until the entire area is cleaned of blood and bodily fluids and contaminated equipment has been disinfected or disposed of safely.

SPECIALIZED TRAINING

First Aid and CPR training is made available to all Taylor Davis Landscape & Construction employees.

PERSONAL PROTECTIVE EQUIPMENT

When the possibility of an occupational exposure to a bodily fluid is present, PPE will be provided at no cost to employees. Examples of PPE used to protect workers from bloodborne pathogens include, but are not limited to, gloves, gowns and masks. Refer to Bloodborne Pathogen Exposure Control plan for the specific project where occupational exposure may occur.

Most construction activities are generally not considered to have occupational exposures to bloodborne pathogens as defined by OSHA, however, where a site-specific safety plan identifies a project specific situations that occupation- al exposure will exist, a Bloodborne Pathogen Written Exposure Control Plan will be developed and easily accessible to all employees. Employees will be informed of where to find it.

EQUIPMENT

MAJOR CONSTRUCTION EQUIPMENT

Taylor Davis Landscape & Construction recognizing that well maintained equipment is safe, must:

- Keep equipment clean,
- Repair all minor and major failures immediately,
- Follow manufacturer's recommendations when operating and repairing,
- Assign responsibility for maintenance to specific personnel,
- Keep a permanent record for each major piece of equipment; the record shall include the lubrication and fuel recommendations; the lubrication, inspection and service records; special data and overall equipment history.\,

- Make weekly service and inspection reports. Individual reports are to be filed by service crews, listing all service and repairs performed, and
- Require equipment operators to file a brief report/form requesting repairs and service.

TRUCKS AND AUTOMOBILES

All operators must be experienced drivers. Only authorized operators are permitted to move trucks, except in the case of an emergency. All operators must be furnished with copies of local and state ordinances and must be familiar with laws governing traffic in the states in which they operate. These ordinances and laws must be observed at all times. Taylor Davis Landscape & Construction maintains the following program for trucks and automobiles:

- Keep the vehicles as clean as possible under the project circumstances,
- Repair all minor and major failures immediately,
- Follow manufacturer's recommendations when operating and repairing,
- Keep adequate maintenance records, including the equipment involved, work done, date completed and personnel performing the work,
- Complete a weekly service and inspection report on each vehicle; reports should be filed by the immediate supervisor under which the equipment is being operated. This report covers the general vehicle conditions, including lights, horn and brakes,
- All lights, reflectors and other accessories required by Motor Vehicle Regulations will be provided,
- The operator must make certain that all vehicles under his/her use are free of foreign or loose objects within the seating compartments in order to ensure the safe and proper operation of the vehicle,
- No person is permitted to remain in/on a truck while it is being loaded/unloaded by excavating equipment or cranes; unless the cab is adequately protected against impact,
- The material load must be within the safe weight limit for the truck and must not project beyond the truck body in such a manner as to present a hazard to other vehicles, pedestrians or structures,
- Loads projecting over the end of the truck must be marked with a red flag and lit at night,
- Loose material must be piled or covered so as to prevent jarring and spillage,
- While being loaded, trucks must be properly blocked,
- Trucks being operated on public highways must conform to weight and clearance limitations of bridges, power lines, overhead structures and other restrictions,
- All operators are required to stay within posted speed limits at all times,
- Trucks must be backed-up under the direction of a signal person if the operator's rear-view is obstructed, and
- Windshields, rear view mirrors and lights must be kept clean.

PERSONAL PROTECTIVE EQUIPMENT

It is mandatory that all employees wear hard hats and safety glasses at all times while on the project site.

- Adequate eye protection must be worn by all employees when hammering on metal, stone or concrete and while sledging, chipping, caulking, using manual impact or powder actuated tools or any other operations subjecting the eyes or head to flying particles.

- All operations involving scaling, grinding of metal and stone dressing where protection from dust and small particles is important, require eye protection of an approved type.
- All operations involving soldering, pouring of lead joints, handling of hot tar, oil, acids, caustics and creosoted material require adequate eye protection.
- All employees involved in, or working in the vicinity of, welding operations must wear eye protection with lenses of the required shade.

- Hand protection must be worn by all employees when handling rough, sharp-edged abrasive materials or when the work subjects the hands to lacerations, punctures, burns or bruises. However, gloves will not be worn for close work around saws and similar machinery in which they are likely to become entangled.

- Safety shoes with a minimum of a metal toe shield must be worn by all employees engaged in the operation of pneumatic tools and all other work where the employee is subjected to possible foot injury.

- All employees must wear clothing suitable to the weather conditions and work being performed.
- Life lines and safety belts must be used when deemed necessary or when required by the immediate supervisor, local codes or ordinances.

- All flag people must be furnished with reflectorized safety vests.

- During Site Specific Safety Planning, any PPE beyond what is described as mandatory for all roles shall be de- scribed and selected.

- All employees will be trained on the proper selection, use and care of PPE, including determination of proper fit and size. If necessary, employees shall be retrained.

- All PPE must be kept in a clean and sanitary condition. Any PPE found to be beyond its useful life, irreparable or defective, shall be disposed.

HEARING PROTECTION

Hearing protection is provided to and expected to be carried with employees at all times. Hearing protection will be used when the sound levels exceed those shown in the table below when measured on the A-scale of a standard sound level meter at slow response.

When it is not feasible to utilize administrative or engineering controls to reduce noise levels below the sound levels listed in the table below, employees shall use hearing protection to reduce sound levels within the levels of the table.

Permissible noise exposures:

Typical construction work and resulting decibels have been previously determined by NIOSH testing and can be used to determine when hearing protection must be utilized.

Duration per day (hours):	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

NOTE: **Hearing protection required at 90 dBA, ACTION LEVEL is 85 dBA. Notable tools and dBA are listed below.**
Sanders – 95 dBA
Drills – 100 dBA
Saws – 105 dBA
Jackhammer – 110 dBA
Riveter – 115 dBA

HEARING PROTECTION IS REQUIRED TO BE WORN WHEN USING ANY POWER TOOL.

Taylor Davis Landscape & Construction will provide a training program for all employees who are exposed to action level noise. This training will be repeated once per year for each employee and updated consistently to align with changes in PPE and work processes. Affected employees will be given copies of the noise exposure procedures and will have access to a copy posted in the workplace. The safety director and corporate safety coordinator will also have access to these records.

We provide a continuing effective hearing conservation program that will be administered to all employees who have been exposed to sound levels greater than 85 dBA on an eight hour time-weighted average basis.

We employ a monitoring program to identify employees whose exposure may equal/exceed the eight hour time- weighted average of 86 dBA. Employees who are exposed will be included in the conservation program.

We provide an audiometric testing program that offers audiometric testing to all employees whose exposures equal or exceed an eight hour time-weighted average 85 dBA.

Within six months of an employee's first exposure at or above the action level, a valid baseline audiogram will be established against which future audiograms will be compared. When a mobile van is used, the baseline will be established within one year.

Each employee tested to establish a baseline audiogram must have at least 14 hours without exposure to work- place noise prior to the test. Hearing protection may be used to meet this requirement. Employees will be notified to avoid high levels of noise. We will obtain a new audiogram for each employee exposed at or above an eight hour time-weighted average of 85 dBA at a minimum of once per year after obtaining their baseline audiogram. Each employee's annual audio- gram will be compared to their baseline audiogram to determine if the audiogram is valid and if a standard thresh- old shift has occurred. If the comparison indicates a standard threshold shift has occurred, the employee will be informed of this fact in writing within 21 days of the determination.

Unless a physician determines that the standard threshold shift is not work-related or aggravated by occupation- al noise exposure, we will ensure that employees already using hearing protectors will be refitted and retrained in the use of hearing protection and will provide hearing protectors that offer greater attenuation, if necessary. If additional testing is necessary, or if we suspect that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors, as appropriate, the employee will be referred for a clinical audiological evaluation or an ontological examination.

Hearing protection will be provided at no cost to the employee and will be replaced as necessary for all employees exposed to an eight hour time-weighted average of 85 dBA. We will ensure that hearing protectors are worn and that each employee is properly trained in the use, care and fitting of protectors.

Hearing protection will be evaluated for the specific environments in which the protector is to be used.

Accurate records of all employee exposure and audiometric measurements will be maintained as required by regulation

ACCIDENT INVESTIGATION

RESPONSIBILITY

It is the responsibility of the supervisor of the area wherein the accident occurred to investigate.

ACCIDENTS TO BE INVESTIGATED

All accidents that involve company equipment, members of the public and/or injury to employees requiring doctor's attention must be investigated.

All accidents where a need is indicated due to the type of exposure or frequency. This will include some first aid cases, and occasionally even cases where there was no injury, but where a potential or possibility of an injury exists.

All other accidents not described above, whether involving employees, equipment or members of the public, should be studied to ensure that existing controls are adequate. A written report must be made to the immediate supervisor.

REPORTING PROCEDURE

A prescribed form should be used for all written investigation reports. The original of this report must be
submitted to management, with a copy also given to the safety director.

All report forms must be complete. No incomplete report will be accepted.

Reports will be reviewed by management to determine that a thorough investigation was conducted and that effective, corrective action was developed to prevent future accidents of the same type. If similar exposure exists in other areas, management will coordinate corrective action with other supervisors involved.

REPORTING ACCIDENTS AND INJURIES

ACCIDENTS TO EMPLOYEES

All supervisors will be furnished with the name of the representative and/or insuring company, address and tele- phone number that provides service for their job location. Any accident resulting in serious injury or death to an employee must be immediately reported to the office by telephone, a similar report shall be made to the safety director.

When reporting serious accidents where an ambulance or doctor is needed, clearly state the exact location and provide succinct directions for reaching the accident scene. Report the nature of the injury, and the treatment or first aid provided, to medical personnel.

All accidents, regardless of severity, must be reported in writing to the main office as promptly as possible. This report will contain all information pertaining to the accident,

including the specific cause or causes, and be submitted on the appropriate company supplied form.

If the injury involves medical treatment, or is one that could have been serious, a complete detailed investigation must be made to determine what may be done to prevent similar accidents in the future. If an injury involves loss of time, permission must be obtained from the attending physician before the injured person may return to work.

AUTOMOBILE ACCIDENTS

In case of an accident involving the operation of an Taylor Davis Landscape & Construction vehicle, or a privately owned vehicle being used for company business, the driver must:

- Stop at once, determine if anyone is injured, determine the nature and extent of injury and give first aid and all reasonable help, if necessary,
- Obtain the names and addresses of all witnesses before leaving the scene of the accident,
- Obtain the name and address for the driver of each vehicle involved, and the names and addresses of all passengers riding with each driver,
- Secure all available data of each vehicle involved, including make, model, type, year, state and license number,
- Secure all available data from the operator's or driver's license for the driver of each vehicle involved,
- Note the time and place of the accident,
- Make, or have prepared, a diagram of the accident location providing the distances, exact position of the vehicles and their relation to sidewalks, curbs, intersections or other objects,
- If possible, obtain snapshots of vehicles and the area prior to vehicles being moved,
- Carefully list damage to each vehicle involved,
- Secure the name and badge number of any police officers investigating the accident,
- If a parked vehicle is involved in an accident and the owner cannot be located, leave notice on or in the vehicle giving the owner your name and address. Within 24 hours, notify the police, sheriff or highway patrol of the accident.,
- Comply with other reports as required by state or local ordinance,
- Avoid discussing the accident, and make no admissions of responsibility, with anyone except authorized EV representatives. Necessary data given to a law enforcement officer shall be given in private. Never obligate your employ- er for damages or medical expense for non-employees, and
- Report the accident to the main office location along with the above information.

PUBLIC ACCIDENT

All accidents resulting in injury, death or property damage to a member of the public, and in which the company may be involved, must be reported to the main office at once.

No employee should make statements concerning liability, or indicating that settlement will be made, in any accident resulting in injury or property damage to any member of the public.

In all accidents involving the public, it is important that names and addresses of all witnesses are obtained.

The supervisor in charge must secure all necessary information to report an injury or property damage involving the public to the main office. This information will include the name of the person injured or claiming property damage, address and a complete description of the accident. In the event neither the supervisor, nor any of the employees under his/her supervision, have knowledge of the accident, the report must state such. The supervisor must report the statement made by the person claiming injury or damage to the main office.

PROJECT SUPERVISION

ACCIDENT PREVENTION RESPONSIBILITIES

To initiate and maintain accident prevention programs, the following guidelines must be followed:

- Perform frequent and regular inspection of project sites, materials and equipment by competent representatives of management,
- Prohibit the use of unsafe machinery, tools, materials or equipment. This is to be accomplished by tagging, locking controls or removing from service,
- Allow only those employees qualified, by training or experience, to operate equipment and machinery,
- Host a preconstruction conference outlining accident prevention programming for the project prior to commencing any work. This should include the direct involvement of all trade contractors -- NO EXCEPTIONS,
- Draw a project site layout showing access and haul roads, areas for materials storage and deployment of equipment, placement of temporary structures, vehicle parking spaces and location of underground and overhead utility lines.
- Recognize and plan for unusual hazards that should be anticipated because of the nature of the work to be done, the materials to be used and the physical features of the project site. One copy is to become part of the permanent job file in the home office, one copy is to be placed in the company safety file and one copy is to be filed on the project site with the superintendent in charge,
- Be sure at least one employee is has a valid first aid certificate from the American Red Cross or equivalent agency on every job,
- Know the location of medical facilities (ambulance services, hospitals, clinics) in the area of every job, and
- Maintain records required under federal and state regulations.

INCIDENT INVESTIGATION

When the company is notified of a work-related incident, an incident investigation team made of qualified persons will be appointed to complete an investigation of the incident. The investigation should take place as soon as possible after the incident occurs. While all incidents should be investigated, the extent of such investigation shall reflect the seriousness of the incident. First Aid treated injuries should be investigated, but minimal resources may be required.

- Incidents resulting in fatality must be reported to OSHA within 8 hours.
- Incidents resulting in hospitalization, amputation or loss of an eye must be reported to OSHA within 24 hours.

- Incidents must also be reported to the host client/site operator as soon as possible, or in a timely manner (within 24 hours of incident).
- Incidents resulting in a Recordable Incident must be reported to OSHA within 7 days of the incident occurring.
- The annual OSHA 300 Log shall be signed by an Taylor Davis Landscape & Construction company official.
- The annual OSHA 300A summary shall be visibly posted on each project site, at minimum, from February 1 to April 30.
- All qualified persons involved in incident investigations will be trained on investigation techniques as well as their roles and responsibilities for incident response and investigations.
- All incident evidence must be preserved, secured and collected through notes, photographs, witness statements, flagging and impoundment of documents and equipment for a minimum of five years. Witness interviews and statements must be collected.
- Initial identification of evidence might include a listing of people, equipment and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation and physical factors such as fatigue, age and medical conditions.
- The written incident investigation report shall include any immediate corrective actions that were taken as well as any long-term actions that are required to prevent the recurrence of the incident.
- Lessons learned should be reviewed and communicated. Changes to processes must be placed into effect to prevent reoccurrence or similar event

SECTION 2

GENERAL RESPONSIBILITIES & HOUSE KEEPING

Employees are expected to whole-heartedly support safety activities. Preventing accidents is the responsibility of each and every employee. While on client premises, the client's safety rules must be followed in addition to those outlined in this manual.

Appropriate shirts and long pants are required. Clothing with excessive holes or fraying is not permitted.

An employee shall not do any of the following:

- Engage in any act which could endanger another employee,
- Work while under the influence of intoxicating beverages or substances which would impair his/her ability to perform tasks in a safe manner,
- Fight, horseplay or roughhouse,
- Operate any machinery or equipment unless they have received the necessary training and/or certification, or
- Point any tools or equipment at any other person.

EMPLOYEES SHALL STAY FOCUSED ON THE JOB AT HAND AND KEEP TEMPERS UNDER CONTROL.

All project sites shall be kept orderly and neat; materials shall be properly stacked and debris shall be kept to a minimum.

A person with a valid First Aid/CPR certificate shall be present on the project site at all times to render first aid if needed.

First aid supplies shall be available and readily accessible at each project site. First aid kits shall be adequately inspected, stocked, checked before being sent out to each job and at least weekly.

Eye washing equipment shall be available and readily accessible at each project site.
The telephone number and address of the nearest Med-1 facility shall be posted at every project site.

Garbage capable of rotting or becoming putrid shall be placed in a covered container. Container contents shall be disposed of at frequent and regular intervals.

Combustible scrap and debris shall be removed in a safe manner from the work area at reasonable intervals during the course of construction.

Floors and aisles shall be free of debris and maintained in a manner that does not create a hazard for employees.

When equipment and employees use the same aisle, dock or doorway, clearances shall be provided and maintained to assure safe passage for the employees and equipment.

Blades of a fan located within eight feet of a floor or work space and used for ventilation or cooling shall be guarded with a firmly affixed or secured guard. Any opening in the guard shall not have more than one of its dimensions more than one inch apart.

A supply of drinking water shall be available to employees in all places of employment. Toilet facilities at construction sites shall be provided for employees at a minimum ratio of one toilet per 20 employees.

To ensure sanitation, toilet facilities shall be cleaned and maintained on a regular basis, and Toilet facilities shall be supplied with toilet paper.

Washing facilities shall be provided for employees who are engaged in the application of paint, coatings, herbicides and/or insecticides or in other operations where contaminants may be harmful to employees. The facilities shall be in close proximity to the work site and shall be equipped with product to remove paint, coatings, herbicides, insecticides, or other harmful items.

A minimum illumination intensity of 10-foot candles shall be provided in areas of any project site where construction work is being performed.

A minimum illumination intensity of 5-foot candles shall be provided in areas of any project site where construction work is not being performed but, where workers pass through.

Never work aloft if afraid to do so, subject to dizzy spells or apt to nervousness.

HANDLING & STORAGE OF MATERIALS

Before unloading material from a vehicle, rail car or storage location, examine the load or pile to see if the material has shifted, come loose or is otherwise unstable. If a hazardous condition is found**, do not attempt to move the material until appropriate corrective measures have been taken**.

Be alert to the potential hazard that may be created when unfastening material that has been secured for shipping with bands or straps that may be under tension. Before unfastening such shipping bands or straps, ensure that the material is adequately restrained by other means, such as temporary safety straps or chains that will prevent sudden uncontrolled movement of the material.

Hooks or clasps used to fasten such temporary safety straps or chains should always be attached in a manner that is secure with or without tension on the strap or chain. If unfamiliar with the proper way to use temporary safety straps or chains during unloading, ask a foreman or qualified supervisor for direction before
proceeding. If attempting to unload material in a hazardous condition, without appropriate corrective measures in place, employees will be subject to disciplinary action.

Material rigging shall not exceed the rated capacity and must be in good condition.
Please refer to the section on Fire Protection & Prevention for procedures relating to inside and outside storage and handling of flammable and combustible materials.

Storage shall be set up to ensure first in, first out usage.

Materials which may be dislodged by wind, and/or could create a hazard when left in an open area, shall be secured.

Storage of material on a floor shall not exceed the allowable floor load.

Engine fuel, cooling water and shielding gas shall not be allowed to leak.

Material shall be stacked, racked, blocked, interlocked or otherwise secured to prevent sliding, falling or collapsing during storage or transit.

Before material is unloaded from a rail car or vehicle or removed from storage, ensure the load or pile is not otherwise hazardous to an employee. If a hazardous condition is found, an attempt shall not be made to remove the load until corrective measures are taken that ensure the safety of the employee exposed to the hazardous condition.

The maximum safe load limit in pounds per square foot of a floor or building roof shall be posted in all storage areas, except a slab on grade. The maximum safe load limit shall not be exceeded.
Except for masonry and mortar, material shall not be stored within four feet of a working edge during overhead brick laying.

Gravel, sand and crushed stone shall be withdrawn from a pile or barrow area in a manner that prevents overhangs and vertical faces.

Storage areas, aisles and passageways shall be kept free from the accumulation of materials that could cause a hazard to the movement of material-handling equipment.

If a difference in road or work levels exists, ramps, grading or blocking shall be provided to ensure the safe movement of material-handling equipment.

A rail car, truck or semitrailer shall be chocked or otherwise secured during loading and unloading if their movement could create a hazard for employees.

Material shall not be stored with any other material with which it could react and cause a hazardous condition.
While roofing work is being performed, materials and equipment shall not be stored within six feet of a roof edge, unless guard rails are erected.

Materials that are piled, grouped or stacked near a roof edge shall be stable and self-supporting.

LUMBER

Lumber shall be stacked on level and solidly supported sills so as to be self-supporting and stable.

The width of a pile of lumber shall be no less than ½ the height.

A pile of lumber manually stacked, and a pile of lumber to be manually unstacked, shall not exceed six feet in height.

Lumber which is mechanically stacked shall not exceed 10 feet in height. This lumber shall not be re-handled manually.

Used lumber shall have all protruding nails removed or bent into the lumber prior to stacking.

CLEARANCES

Material stored near an electrical distribution or transmission line shall maintain the following clearances:

Line rated 50 KV or less – 10 feet plus length of material stored, or

Line rated 51 KV or more – 10 feet plus 1 foot for each additional KV plus length of material.

An employee shall be designated to observe the clearance and give timely warning to the operator if they are unable to see for themselves.

An employee storing or handling material shall not come closer than within six feet of a roof edge, unless guard- rails are erected.

HANDLING MATERIALS TO BE DROPPED

The area onto and through which material is to be dropped shall be completely enclosed with barricades not less than 36 inches, or more than 42 inches high, and not less than six feet back from the area receiving the material. Signs warning of the hazard of falling materials shall be posted on the barricades at each level.

If material is dropped through more than one level, the opening shall be enclosed between the upper and lower levels, an enclosed chute must be provided or the intermediate levels must be barricaded not less than 42 inches high and not less than six feet back from the projected edge of the opening above

If material is to be dropped from more than 40 feet inside a building, an enclosed opening or material chute must be used. The enclosed opening or material chute shall extend through the ceiling at the receiving level.
A material chute shall be constructed to withstand any impact load imposed on it.

HOOKS, SHACKLES AND OTHER ACCESSORIES

A hook shall have a rated capacity equal to the chain or rope to which it is attached. The load shall not exceed the rating. Shackles and other accessories shall have a rated capacity equal to or greater than the load to which it is attached.
A hook shall be discarded if:

- The throat opening is more than 15% greater than the manufactured size, or
- The hook has more than a 10 degree twist from a vertical center line drawn through the hook center.
- A closed hook shall be used if there is a probability of the load becoming disengaged.
- Special, custom designed grabs, hooks, clamps and other lifting accessories, for such units as modular panels, prefabricated structures and similar materials shall be marked to indicate the safe working loads and shall be proof tested to 125% of their rated load.
- A job or shop hook and link, or a makeshift fastener, formed from a bolt, rod or other such accessories, shall not be used.

WELDING MATERIALS

Oxygen cannot be stored within 25 feet of acetylene/propane unless in use.

A cylinder shall be stored away from any source of heat in excess of 125 degrees Fahrenheit.

A cylinder, whether full or empty, in storage or during shipment, shall have the valve closed and the cap in place. If a cap is not provided, a chain, bracket or other restraining device shall be used at all times to prevent cylinders from falling.

A cylinder storage area shall be posted with the names of the individual gases stocked and a warning shall be posted against tampering by an unauthorized employee. An assigned storage area shall be located where a cylinder will not be knocked over or struck by a passing or falling object.

A storage area for cylinders shall be well ventilated.

A cylinder shall not be stored in basements or pits.

A chain, bracket or other restraining device shall be used at all times to prevent cylinders from falling.

A cylinder shall stand valve end up at all times.

A cylinder shall not be dropped, dragged, rolled on its side or struck violently.

When using a crane or hoisting device, a cylinder shall be lifted only by cradles or enclosed platforms. An electro- magnet, hook, rope or sling shall not be used.

A frozen or ice-clogged valve shall be thawed either by warm air or warm water and shall be dried before using. Boiling water or flame shall not be used. Force shall not be applied to a valve or cap to loosen a cylinder frozen in place.

A cylinder shall not be placed where it may become a part of the electrical circuit by accidental grounding or where it may be burned by an electrical welding arc. A cylinder shall not be placed so that hot slag or flame can reach it unless the cylinder is protected by a fire-resistant shield. An electrode shall not be taped against a cylinder to strike an arc.

A cylinder valve shall be opened slightly for an instant and then closed before connecting to a regulator or manifold to clear the valve of dust and dirt. The employee opening the valve shall stand to one side of the outlet, not in front of it. This shall not be done near a source of ignition. Pressure to a regulator shall be introduced by slowly opening the cylinder valve. An acetylene cylinder valve shall only be opened enough to allow proper working pressure, but shall not be opened more than 1 ½ turns of the spindle.

Acetylene shall not be utilized or piped, except in cylinder manifolds, at a pressure in excess of 15 PSIG.

A cylinder to which a regulator is attached shall not be moved unless secured to a hand or powered truck designed for this purpose.

A cylinder valve shall be closed in any of the following situations:

- When moving the cylinder,
- When the work is finished or is left unattended during lunch, overnight or any other prolonged period, or
- When the cylinder is empty.
- A cylinder, whether full or empty, shall not be used as a roller or support.
- A damaged or leaking cylinder, a cylinder with a valve stuck open or a valve in need of repair shall be taken outdoors (away from sources of ignition), tagged with a warning sign and the manufacturer or distributor notified. Complete removal of the stem from the cylinder valve shall be avoided.
- Nothing shall be placed or stored on top of a cylinder.

- Electrodes shall be retracted or removed when not in use. Electrode holders not in use shall be placed so that they cannot make electrical contact with employees, fuel, gas tanks or conducting objects.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 8: Handling and Storage of

FALL PROTECTION

All employees working on a walking/working surface 6 feet or more above the ground or lower level, with an unprotected side or edge, shall be protected from falling by the use of guardrail systems, safety net systems or personal fall arrest systems.

A Controlled Decking Zone must be established for leading edge decking operations above 15 feet.

Edge workers must be protected from falling if working within a Controlled Decking Zone above 30 feet.

Perimeter cable must be installed as soon as the metal decking is installed.

Holes (two inches or greater in dimension) must be covered, fastened down and labeled.

All raised floors with unprotected sides in excess of 20" from the next surface below must have fall protection, such as a guardrail system.

GUARDRAIL SYSTEMS

The top-rail, mid-rail, toe-kick and posts of a guardrail system shall, at minimum, be made of 2 by 4 lumber.

The top-rail shall be installed at 42 inches from the finished floor.

The mid-rail of a guardrail system shall be installed at 21 inches from the finished floor.

A toe-kick shall be installed to keep materials, tools and debris from being kicked over the edge. The toe-kick shall be at minimum of four inches high.

Guardrails shall be capable of withstanding, without failure, a force of at least 200 pounds in any outward or downward direction at all points along the guardrail.

Guardrail systems shall be surfaced as to prevent injury to an employee from punctures or lacerations and to pre- vent snagging of clothing.

The ends of all top-rails and mid-rails shall not overhang the posts.

When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.

SAFETY NET SYSTEMS

Safety net systems shall be installed as close as practical under the walking/working surface upon which employees are working, but never more than 30 feet below the walking/working surface.

Safety nets shall be installed with sufficient clearance under them to prevent contact with the surface or structures below.

Defective nets shall not be used.

Safety nets shall be inspected once per week for wear, damage and other deterioration. Defective components shall be removed from service. Safety nets shall also be inspected after any occurrence which could affect the integrity of the safety net system.

Materials, scrap pieces, equipment and tools which have fallen into the safety net shall be removed as soon as possible from the net and no later than before the next work shift. The maximum size of each safety net opening shall not exceed 36 square inches, nor be longer than six inches on any side. All mesh crossing shall be secured to prevent enlargement.

Each safety net shall have a border rope for webbing with a minimum breaking strength of 5,000 pounds.

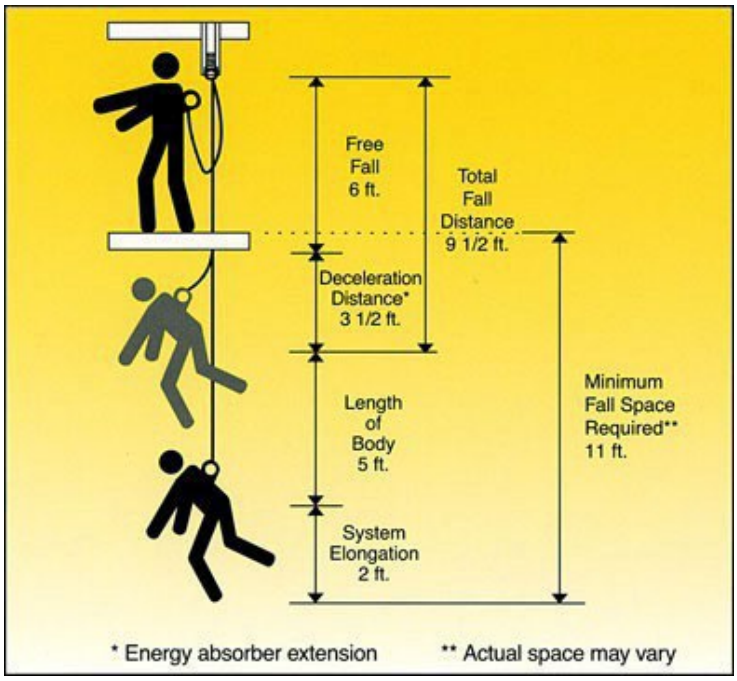
Connections between safety net panels shall be as strong as integral net components and shall be spaced not more than six inches.

A designated person shall certify each safety net before they can be used as fall protection. Certification includes a visual inspection of the net, net components and installation. Each net shall be identified with a numbered tag and a record of each net certification shall be kept onsite.

PERSONAL FALL ARREST SYSTEM

Personal fall arrest systems shall comply with the following:

- Lifelines shall be protected against being cut or abraded,
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorages being used to support or suspend platforms and capable of supporting at minimum of 5,000 pounds per attached employee, and
- Be rigged so an employee doesn't fall more than six feet or come into contact with a lower level.
- Harnesses, lanyards or other components shall not be used to hoist materials or tools.
- Personal fall arrest systems including harnesses, lanyards and retractable life-lines that are damaged shall be removed from service and given to the safety director for repair or service.
- Any component of a personal fall arrest system that has been used previously to arrest a fall shall be removed from service and shall not be used unless it has been replaced or re-certified by the manufacturer.
- Personal fall arrest systems shall not be attached to guardrail systems.



WARNING LINE SYSTEMS

A warning line system shall be erected along all sides of the roof work area, six feet from the edge.

Points of access, material handling areas, storage areas and hoisting areas shall be connected to the work area by an access path formed by two warning lines.

The warning line shall consist of a rope flagged with highly visible material at six feet intervals.

The warning line rope shall be strung through the stanchions in such a way that the sag between stanchions is no less than 34 inches and no more than 39 inches from the roof.

Warning line systems shall be kept current (erected to within six feet of the leading edge) in the middle of, and at the end of, each work shift.

No employee shall be allowed between the leading edge and the warning line unless the employee is performing roof-decking work.

PROTECTION FROM FALLING OBJECTS

Toe-boards, when used as protection from falling objects, shall be erected along the edge of the overhead walking/working surface.

Toe-boards shall be capable of withstanding (without failure) a force of at least 50 pounds applied in any outward direction at any point along the toe-board.

Toe-boards shall be a minimum of four inches high.

Where tools, equipment or materials are piled higher than the top edge of a toe-board, paneling or screening shall be erected from the walking/working surface or toe-board to the top of the guardrail system.

Materials and equipment shall not be stored within six feet of a roof edge unless guardrails are erected at the top edge.

Materials, which are piled, grouped or stacked near a roof edge shall be stable and self-supporting.

METAL BUILDINGS

Any employee elevated in a boom-lift or man-cage shall wear a harness and lanyard and be attached to an approved anchor.

All roofing operations shall be guarded with a warning line system.

Equipment and materials shall be placed within the warning line system.

Any employee involved in "running the bottom" of a roofing operation shall be protected from falling by using a harness, lanyard and retractable lifeline system regardless of the ground to eave height.

Any employee involved in gutter and trim work which requires working outside of the warning line system, shall be protected from falling by using a harness, lanyard and retractable lifeline system regardless of the ground to eave height.

No employee is permitted to work above exposed reinforcing steel.

Any employee involved in connecting structurally integral components over 30 feet shall be protected from falling by either a guardrail system, safety net system or personal fall arrest system.

IRONWORK

A perimeter cable shall not be less than 3/8-inch wire rope. Fasteners, anchors and supports for a perimeter cable shall have a capacity not less than that of the wire rope used for a perimeter cable.

Any employee elevated in a boom-lift or man-cage shall wear a harness and lanyard and be attached to an approved anchor.

An end-to-end splice shall not be used in a perimeter cable.

A perimeter cable and its fasteners, anchors and supports shall be capable of withstanding a side thrust of not less than 200 pounds at the mid-point of the span.

A perimeter cable shall be tightened to allow not more than a six inch deflection in any direction at the mid-point of the span.

A danger sign shall be attached to the cable midway between each pair of supports. In place of a sign, yellow- colored weather resistant strips not less than 1 by 8 inches in length may be suspended from the cable at eight foot intervals.

The cable may be removed between adjacent supports for the purpose of unloading or loading material. An employee who assists in the loading or unloading shall be protected from falling by wearing a harness and lanyard and being attached to an approved anchor.

Access to the exposed edge, caused by the temporary removal of the cable shall be barricaded to prevent entry by other employees.

If a lanyard or lifeline is attached to a perimeter cable, the perimeter cable shall be able to withstand 5,400 pounds of force at the mid-point of the span.

RESIDENTIAL CONSTRUCTION

A continuous row of slide guards shall be installed at the eave during sheathing work where the roof pitch is 4/12 or greater, regardless of ground to eave height.

An additional row of slide guards shall be installed at 13 foot intervals for roofs 4/12 up to and including 9/12.

For roofs 10/12 and greater, slide guards are required at 4 foot intervals and a personal fall arrest system is also required.

FALL PROTECTION PLANS

Employees involved in leading edge work, pre-cast concrete erection work or residential construction work where conventional fall protection (guardrail systems, safety net systems or personal fall arrest systems) is not feasible, must have a Fall Protection Plan posted onsite.

All Fall Protection Plans must be completed by the project supervisor or foreman and be approved by the safety director.

All Fall Protection Plans must be job specific.

WARNING LINE SYSTEM

Warning line must be 6' from the edge if you are a roofer, but not just because you are doing roofing.

If you are a multi-trade or trade specific contractor, the warning line must be 15' from the edge.
This is for low slope only,

- Flat roof to 4/12,
- Slopes 4/12 or above need to use one of three OSHA approved fall systems, and
- Holes or skylights in the roof, unless covered, negate these rules.

When working six feet or more off of the ground (15' for steel erection only), one of three OSHA systems is required:

- Guard rail,
- Personal arrest system (harness with tie off point), or
- Safety net system.
- Warning line standards:
- Warning lines shall consist of ropes, wire or chains and supporting stanchions erected as follows:
- The rope, wire or chain shall be flagged at no more than six foot intervals with high-visibility material,

The rope, wire or chain shall be rigged and supported in such a way that its lowest point is no less than 34 inches (including sag) from the walking/working surface. At its highest point, it must not be more than 39 inches from the walking/working surface.

FALL PROTECTION

After being erected, with the rope, wire or chain attached, stanchions shall be capable of resisting, with- out tipping over, a force of no less than 16 pounds applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof or platform edge,

The rope, wire or chains shall have a minimum tensity strength of 500 pounds and, after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions as prescribed at 16 pounds,

The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over,

No employee shall be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in the area, and mechanical equipment on roofs shall be used or stored only in areas where employees are protected by a warning line system, guardrail system or personal fall arrest system.

CONTROLLED ACCESS ZONE

Controlled access zones are to be used only by roofers and masons because it involves moving up or out. OSHA states that if fall protection is not feasible, not using fall protection is an option.

If fall protection is not an option, a plan needs to be established in writing.
When installing new systems, being a roofer or mason does not exempt you from using fall protection if it is avail- able (example: standing seam clamps).

Only roofers and masons may work without fall protection if deemed not feasible, not multi-trade contractors.

TRAINING

Fall protection training is provided to all employees who may be exposed to fall hazards. Employees are trained to recognize the hazards of falling and the procedures to follow to

minimize these hazards. Training records identifying participants, training dates and signatures of instructors must be maintained.

Retraining is required if work practices are changed, fall protection equipment is modified or when an employee demonstrates that they do not have the understanding and skill required to recognize and mitigate fall hazards.

FALL INCIDENTS

Each project is evaluated for fall hazards and a determination is made if personal fall arrest systems will be used. If personal fall arrest systems are used, then a site-specific rescue plan will be developed to ensure equipment and services for prompt rescue of fallen workers are available before elevated work begins.

Planning should include combination of self-relief, self-rescue, assisted rescue and professional rescue by local emergency response services.

All incidents related to an employee falling are investigated for root causes to look at the fall protection plan to see if any updates are needed to keep the incident from happening again.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 45: Fall Protection

ELECTRICAL

All extension cords, temporary receptacles and electrically powered equipment must be visually inspected for external defects (such as deformed or missing pins), insulation damage or indications of possible internal damage.

Only licensed electricians can install electrical equipment.

All live parts of operating electrical equipment in excess of 50 volts must be properly guarded by limiting access of energized electrical equipment such as switch gear, transformers and service panels to qualified employees.

Provide and insure the proper use of an accident prevention sign on electrical apparatus, equipment and enclosures; voltage must be indicated.

Provide a conductor of a capacity not less than the rating of the circuit breaker or fuses protecting that circuit.

Ensure that a bare conductor or earth return is not used for any temporary circuit.

Ensure that all electrical wiring is protected from physical damage.

An employee is not permitted to be in the proximity to any part of an electric power circuit with which he/she may come into contact unless the employee is protected against electric shock. The employee can be protected by de-energizing the circuit and locking out and tagging it. The employee can also be protected if the energized circuit is guarded by insulation, insulated tools or insulated matting or blankets sufficient to protect against the voltage.

When an employee is using a jack-hammer, bar or other tool which could come into contact with an underground line, the energy source must be de-energized.
A work space of not less than three feet wide and seven feet high, in addition to space necessary to open equipment doors not less than 90 degrees, shall be provided and maintained in the area of electrical equipment.

Where work requires the handling of energized conductors or switch gear of 440 volts or more between phases, two or more qualified employees shall work together.

A temporary light, with a guard, shall be equipped to prevent accidental contact with the bulb. A guard is not re- quired when the bulb is fully recessed in the reflector.

Electrical lines crossing work areas, employee foot or vehicular traffic aisles, shall be fastened overhead or protected by a cover capable of withstanding the imposed loads without creating a tripping hazard.

Electrical equipment shall be inspected periodically. The inspections shall be made at reasonable intervals ac- cording to the equipment use and the severity of conditions under which it is used. Worn and frayed cable shall not be used.

Repairs of electrical equipment shall be made by a licensed electrician.

All employees are provided electrical awareness training, however only licensed electricians trained in electrical safety-related work practices may perform electrical work.

Employees may not enter spaces containing exposed energized parts. Only licensed electricians trained in electrical safety-related work practices may perform electrical work, in which case, all of the following requirements apply:

- A minimum of an illumination intensity of 10 footcandles must be kept,
- Portable ladders must have nonconductive siderails if they are used where the employee or the ladder could contact exposed energized parts, and
- Conductive articles of jewelry and clothing (such as watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread or metal headgear) may not be worn if they might contact exposed energized parts. However, such articles may be worn if they are rendered nonconductive by covering, wrapping or other insulating means.
- GFCI's must be used on all 120-volt, single phase 15 and 20-ampere temporary wiring on construction all sites

LADDERS

If there is a break in elevation of 19 inches or more, a ladder or stairway shall be provided at all personnel points of access.

Personnel points of access where ladders are used shall be kept clear to permit access to employees.

A ladder shall be inspected before use and after it has fallen or been involved in an accident to determine its condition.

A ladder that has any of the following faults or defects shall be immediately tagged: "DANGEROUS – DO NOT USE" and shall be withdrawn from service:

- Broken, worn or missing rungs, cleats or steps,
- Broken or split side-rails,
- Broken or bent guides or iron spreaders, or
- Broken or bent locks.
-

Ladder repairs shall restore the ladder to a condition that meets its original design criteria before the ladder is returned to use.

A ladder shall not be placed in a passageway, doorway or driveway unless it is protected by barricades or guards or is secured to prevent accidental displacement.

A ladder shall be placed on a substantial and stable base unless it is secured to prevent accidental displacement.

The area around the top and bottom of the ladder shall be kept clear.

An employee shall face the ladder when ascending and descending.

Each employee shall use at least one hand to grasp the ladder when progressing up or down the ladder.

An employee shall not carry an object or load that could cause the employee to lose balance and fall.

An employee who is on the ladder shall not overreach or do any pushing or pulling that may cause the ladder to move or topple. If both of an employee's shoulders are outside of a side-rail, the employee is overreaching.

Only one person is permitted on a step-ladder or portable extension ladder at a time.
If a ladder provides the only means of access to, or egress from, a working area for 25 or more employees, or if simultaneous two-way traffic is expected, a minimum of two ladders shall be provided.

A ladder shall not be loaded beyond its load carrying capacity.

A ladder shall not be moved, shifted or extended while occupied by an employee.

A portable extension ladder shall be used at a 4-to-1 ratio.

A portable extension ladder being used to access an upper landing surface shall extend above the upper landing surface by three feet and be tied off at the top to prevent displacement. (Portable extension ladders not being used to access an upper landing surface need not extend above by three feet, nor be tied off).

Extension ladders that are placed on unstable or slippery surfaces where there is the likelihood for displacement must be cleated or otherwise secured at the base of the ladder.

Manufactured metal portable extension ladders or step-ladders shall not be used if contact with electrical transmission is possible.

Two portable extension ladders shall not be spliced together unless they are manufactured for such use.

An employee shall not use the backside of a step-ladder unless the step-ladder is manufactured for such use.

An employee shall not stand on the top rung of any ladder unless the ladder is designed for such use.

Step-ladders cannot be used as straight ladders. Step-ladders must be used open with the spreader bars locked.

Step-ladders may not be used to access upper landing surfaces unless the top of the ladder extends above the intended surface by four feet, is tied off and is used open with the spreader bars locked.

Portable extension ladders shall be equipped with appropriate safety feet.

A ladder should be stored in such a manner as to provide ease of access and inspection. A ladder stored in a horizontal position shall be supported at a sufficient number of points to prevent the ladder form sagging during storage.

A metal ladder shall not be stored where it is subject to reaction with corrosive substances like acids and alkali solutions.

A plastic ladder shall be stored on racks when not in use and in a location which is free of corrosive substances and which provides protection from adverse environmental conditions. A wood ladder shall not be stored near any heat source or where it could be exposed to excessive dampness.

A ladder which is transported on a vehicle shall be secured to prevent it from catapulting or falling from the vehicle.

Ladder rungs, cleats and steps shall be parallel, level and uniformly spaced, when the ladder is in position for use.

Portable ladders and fixed ladders' rungs, cleats and steps (including individual-rung/step ladders) shall be spaced not less than 10 inches (25 cm) apart, nor more than 14 inches (36 cm) apart, as measured between center lines of the rungs, cleats and steps.

Step stools' rungs, cleats and steps shall be not less than eight inches (20 cm) apart, nor more than 12 inches (31 cm) apart, as measured between center lines of the rungs, cleats and steps.

Base section of extension trestle ladders' rungs, cleats and steps shall not be less than eight inches (20 cm) nor more than 18 inches (46 cm) apart, as measured between center lines of the rungs, cleats and steps. The rung spacing on the extension section of the extension trestle ladder shall be not less than six inches (15 cm), nor more than 12 inches (31 cm), as measured between center lines of the rungs, cleats, and steps.

The minimum clear distance between the sides of individual-rung/step ladders and the minimum clear distance between the side rails of other fixed ladders shall be 16 inches (41 cm).

The minimum clear distance between side rails for all portable ladders shall be 11.5 inches (29 cm).

The rungs of individual-rung/step ladders shall be shaped such that employees' feet cannot slide off the end of the rungs.

The rungs and steps of portable metal ladders shall be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize slipping.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 11: Fixed and Portable Ladders

SCAFFOLDING

A scaffold and its components shall be capable of supporting, without failure, not less than four times the maximum intended load.

Scaffold, and scaffold components, shall be inspected for visible defects by a competent person before each work shift and after any occurrence that could affect a scaffolds structural integrity. Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders or platforms, that is damaged or weakened from any cause shall be immediately repaired or replaced. Any scaffold or accessory that is repaired must have at least the original designed strength of the scaffold or accessory. A tag should be used to indicate "Dangerous— Do Not Use" until scaffold is repaired, replaced or removed from service.

Ladders shall not be used on scaffold platforms to increase the working height of employees. An employee on a scaffold who is exposed to an overhead hazard of falling material shall be protected with overhead protection that is sufficient to prevent injury.

All load-carrying wood members of scaffold framing shall be a minimum of 1,500 psi fiber stress value.
The poles, legs or uprights of scaffolds shall be plumb and shall be securely and rigidly braced to prevent swaying and displacement.

The support for a scaffold shall be sound, rigid and capable of carrying the maximum intended load without settling or displacement. Leveling jack adjusting screws, when used, shall not extend more than 18 inches below the base of the scaffold. Unstable objects, such as barrels, boxes, pallets, bricks or concrete blocks shall not be used to support a scaffold or work platform. Scaffold poles, legs, posts, frames and uprights shall bear on base plates and mud-sills or other adequate firm foundations.

Scaffold components that are not designed to be compatible shall not be intermixed.

A shore or lean-to scaffold shall not be used.

Makeshift devices, such as but not limited to, boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of employees.

A ladder shall not be used on scaffolding to increase the working height of employees.

Excess tools, materials and debris shall not be permitted to accumulate on a scaffold to create a hazard.

Work on or from scaffolds is prohibited during storms or high winds.

A scaffold shall be kept free of slippery conditions such as those caused by ice, snow, oil, grease or other slippery compounds.

An employee shall not erect scaffolding within 10 feet of uninsulated or insulated electrical energized lines.

Scaffold platforms being used as a walking/working surface above six feet shall be protected with a guardrail system.

All mobile equipment including, but not limited to, bakers, mobile scaffolding, scissor lifts, boom lifts and all-terrain forklifts must be protected from exposed edges, regardless of height, by suitable anti-slide/anti-roll guarding.

PLANKING AND PICKS

Wood scaffold planks, laminated planks, manufactured work platforms and picks that are found to be defective shall be removed from service and shall not be used.

A manufactured pick shall be permanently marked or tagged to indicate the maximum working load and shall not be less than 14 inches wide when used in single width, except when a ladder jack scaffold may be used with a minimum 12 inch manufactured pick.

Walking/working scaffold platforms shall consist of at minimum, two 2x10 planks laid side by side. Where practical, a walking/working scaffold platform shall be a continuous surface. Planking shall extend over the end bearer not less than six inches, but not more than 12 inches.

Scaffold planking shall be cleated, or otherwise fastened, to prevent shifting and also be uniform in thickness.

Hook-on-type manufactured work platforms may be used if they are secured to the bearer.

Where planks are lapped, each plank shall lap its bearer not less than six inches, which will provide a minimum overlap of 12 inches.

Where scaffold turns a corner, the planks shall be laid to prevent tipping. The planks that meet the corner bearer at an angle shall be laid first and shall extend over the diagonally placed bearer far enough to have a good bear- ing, but not far enough to tip. Planks that run in different directions shall be laid so as to extend over the rest of the first layer of planks. When moving a platform to the next level, an employee shall leave the old platform undisturbed until the new plat- form supports have been set in place and are ready to receive the platform planks.

A slippery condition that has occurred on a scaffold platform shall be eliminated as soon as possible after the condition occurs.

The front of scaffold platforms shall not be more than 14 inches from the face of the work unless guardrails are installed.

If plywood is used as a work platform, the plywood shall be supported by 2x10 inch planks. The planks shall sup- port two parallel edges of the plywood and shall be spaced not more than 24 inches center to center.

The plywood work surface shall be secured to the planks.

If the plywood work surface is a load-carrying member, it shall have a minimum thickness of 5/8-inch.

FALL PROTECTION/FALLING OBJECTS

If there is a danger of tools, materials or equipment falling from a scaffold and striking employees below, then all of the following provisions must apply:

- The area below the scaffold to which objects can fall shall be barricaded and employees shall not be permit- ted to enter the hazard area,
- A toe-board shall be erected along the edge of a platform that is more than six feet above lower levels. The toe-board shall span a distance sufficient to protect the employees below, and
- Guardrail systems shall be installed with openings small enough to prevent the passage of potential falling objects.
- If used, toe-boards shall be in compliance with both of the following provisions:
- Be capable of withstanding, without failure, a force of not less than 50 pounds applied in any downward or horizontal direction at any point along the toe-board, and
- Be not less than 3.5 inches high from the top edge of the toe-board to the level of the walking/working sur- face. A toe-board shall be securely fastened in place at the outermost edge of the platform and have not more than ¼ inch of clearance above the walking/working surface.

TUBE AND COUPLER

A tube and coupler scaffold shall have all posts, bearers, runners and bracing of not less than a nominal 2-inch steel tubing or equivalent.

The material used for couplers shall be of a structural type, such as dropped forged steel, malleable iron or structural grade aluminum. Dissimilar metals shall not be used.

All connections on a tube and coupler scaffold system shall be secured using manufactured locking pins.

Drawings and specifications for a tube and coupler scaffold over 125 feet in height above the base plate shall be designed by a qualified engineer who is knowledgeable in scaffolding. Drawings and specifications shall be readily available at the project site.

Cross-bracing shall be installed on every set of posts.

Guys, ties and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member of the four to one ratio height. They must also be repeated vertically at locations of horizontal members every 20 feet or less thereafter for a scaffold three feet wide or less and every 26 feet or less thereafter for a scaffold more than three feet wide.

CARPENTER'S BRACKET SCAFFOLD

The supporting brackets of a carpenters bracket scaffold shall be made of metal.

The supporting brackets shall be fastened to the structure by 3/8-inch diameter bolts.

The supporting brackets shall be not more than eight feet apart to support one employee and not more than 75 pounds of material.

LADDER-JACK SCAFFOLD

A ladder-jack scaffold shall be used only for light duty work on Type 1 manufactured ladders at heights not more than 20 feet from the ground or floor.

Type 1 ladders are classified as a 30 foot single-section ladder.

EXTENSION LADDER

The span of a wood plank shall not be more than eight feet between ladder-jacks.

The span of a pick shall not exceed 25 feet.

The ladder-jack scaffold platform using planks shall be limited to two employees. If three ladders support the lad- der-jack scaffold pick, three employees may occupy the pick.

All bearing points of a ladder-jack shall be designed to bear on the side-rails and rungs.

TRAINING

Employees who perform work while on a scaffold must be trained by a qualified person. The training shall include:

- The nature of any electrical hazards, fall hazards and falling object hazards in the work area,
- The correct procedures for dealing with electrical hazards and for erecting, maintaining and disassembling the fall protection systems and falling object protection systems being used,
- The proper use of the scaffold, and the proper handling of materials on the scaffold, and
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- When there is reason to believe an employee lacks the skill or understanding of the safe erection, use or dismantling of scaffolds, the employee shall be re-trained. Retraining is required in at least the following situations:
- Where changes at the worksite present a hazard about which an employee has not been previously trained,
- Where changes in the types of scaffolds, fall protection, falling object protection or other equipment presents a hazard about which an employee has not been previously trained, or
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 12: Scaffolds and Scaffold Platform

WALKING AND WORKING SURFACES

A means of access, such as a stairway, ladder or ramp shall be provided at all personnel points of access where there is a break in elevation of 19 inches or more and runway, sloped embankment or personnel hoist is not pro- vided.

When a building or structure has only one point of access between levels, that point of access shall be kept clear to permit the free passage of employees. When work must be performed or equipment must be used such that the free passage of employees at that point of access is restricted, a second point of access shall be provided and used.

Stairways that will not be a permanent part of the structure on which construction work is being performed shall have landings that are not less than 30 inches in the direction of travel and extend not less than 22 inches in width at every 12 feet or less of vertical rise.

Stairs shall be installed at a horizontal angle between 30 degrees and 50 degrees.
Riser height and tread depth shall be uniform within each flight of stairs, including any foundation structure used as one tread depth shall not be more than ¼ of an inch in any stairway system.

Metal pan landings and metal pan treads, when used, shall be secured in place before filling with concrete or other material.

Unprotected sides and edges of stairway landings shall be provided with guardrail systems. Any portion of a roof where employees are working shall be kept free of ice, snow or other slippery conditions.

A stairway which is not more than 44 inches wide and which has enclosed sides shall have a handrail on the right descending side.

A stairway which is not more than 44 inches wide and which has one open side shall have a stair railing on the open side.

A stairway which is not more than 44 inches wide and which has two open sides shall have a stair railing on each side and a mid-rail.

A stairway that is more than 44 inches wide shall have one handrail on each side and one stair rail on each open side.

A stairway that is 88 or more inches wide shall have one handrail on each enclosed side, one stair rail on each open side and one intermediate stair rail located in the middle of the stairway.

Debris and other loose material shall not be permitted on a stairway.

GUARDRAILS

A guardrail shall consist of a top rail, intermediate rail and supporting posts. The top rail shall have a smooth surface and shall be located not less than 36, nor more than 42, inches

above the floor, ramp, platform or runway. The intermediate rail shall be located halfway between the top rail and the floor, ramp, platform or runway. The top rail shall not overrun the supporting post unless it does not constitute a hazard.

A top rail, mid rail and supporting posts shall be constructed of wood which is not less than 2x4 lumber and shall be constructed so as to withstand, without failure, a 200 pound force in any direction.

Vertical supporting posts shall not be placed more than eight feet apart.

STAIR RAILS

A stair railing shall consist of a top rail, intermediate rail and supporting posts.

A stair rail shall be smooth, constructed of wood which is not less than 2x4 lumber and shall be constructed so as to withstand, without failure, a 200 pound force in any direction.

A top rail shall be installed at not less than 36, nor more than 42 inches from the rise of the stairway. The intermediate rail shall be installed halfway between the top rail and the rise of the stairway.

A stair rail shall not have protruding nails or rough or sharp corners and shall not present a projection hazard.

HANDRAILS

A handrail shall follow the slope of the stairway and be of a configuration that provides a handhold when grasped to avoid a fall.

A handrail shall be supported by brackets a distance of not less than 1 ½ inches from any object.

The assembly of handrails and brackets shall withstand a load of not less than 200 pounds applied in any direction.

A handrail shall have a smooth surface along the top and sides and the ends shall not present a projection hazard.

TEMPORARY STAIRWAYS

Stringers shall be at minimum, 2x8 lumber; or if notched, shall be equivalent in strength as an uncut 2x8.

The minimum width of a temporary stairway shall be 22 inches.

Treads shall be the same width as the notches.

For a temporary stairway between 22 and 36 inches wide, a minimum of 2x6 inch lumber shall be used for each tread.

For a temporary stairway between 36 and 54 inches wide, a minimum of 2x8 inch lumber shall be used for each tread.

For a temporary stairway over 54 inches wide, a minimum of 2x19 inch lumber shall be used for each tread.

For temporary stairways over 88 inches, an additional stringer shall be provided in the center. The total vertical rise of a temporary stairway shall be not more than 12 feet, unless stair platforms are provided.

The rise shall not be less than 6 inches, nor more than 8 inches.

The ratio of rise to tread width shall be uniform for all sets of stairs.

Treads shall not be scabbed together, but shall be made of continuous lumber.

Hollow-pan treads are to be filled with concrete or lumber and shall fill the pan to the nosing.

A stairway shall be free of hazardous projections such as nails, sharp top rails and handrail projections.

A stairway shall have a minimum vertical clearance of seven feet from any overhead object, unless the overhead object is padded and caution signs or paint warn of the object.

A floor, platform, stair tread or landing shall be maintained free of tripping or slipping hazards.

Material used to repair floors, platforms, stair treads or landings shall meet the design strength of the original com- ponent.

A floor, platform, stair, runway or ramp shall be free of hazardous projections.

CATCH PLATFORMS

If catch platforms are to be used for fall protection, they must be at minimum, three 2x10 inch pieces laid side by side, installed not more than 18 inches from the eave.

Guardrails must be installed at 42 and 21 inches on three sides of the platform.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 21: Guarding of Walking and Working Areas

SLINGS

A damaged or defective sling, as described in this standard, shall not be used.

A sling shall not be shortened with bolts, knots or other makeshift devices.

Sling legs shall not be kinked.

A sling shall not be loaded in excess of its rated capacity.

A sling shall be securely attached to its load.

A sling, other than an alloy steel chain, shall be padded or protected from the sharp corners of its load.

A suspended load shall be kept clear of all obstructions.

An employee's hand or finger shall not be placed between the load and sling while the sling is being tightened.

Slack shall not be pulled from under the load when the load is resting on the sling.

INSPECTIONS

A sling and all fastenings shall be inspected for damage and defects by a designated employee before each day's use.

Where service conditions warrant, additional inspections shall be performed during sling use. A damaged or defective sling, as described in this part, shall be immediately removed from service.

WIRE ROPE SLINGS

A wire rope sling shall not be used with loads in excess of each wire rope's recommended capacities.

A fiber core wire rope sling of any grade shall be permanently removed from service if it is exposed to a temperature in excess of 200 degrees Fahrenheit.

A wire rope sling shall be removed from service if any of the following conditions are present:

- Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay,
- Wear or scraping of 1/3 the original diameter of outside individual wires,
- Kinking, crushing, bird caging or any other damage resulting in distortion of the wire rope structure,
- Evidence of heat damage,
- End attachments that are cracked, deformed or worn,

- Hooks that have been opened more than 15% of the normal throat opening measured at the narrowest point, or twisted more than ten degrees from the plane of the unbent hook, or
- Corrosion of the rope or end attachment.

An eye in a wire rope sling shall not be formed by using a knot or a wire rope clip.

FIBER ROPE SLINGS

A fiber rope sling made from conventional three strand construction fiber rope shall not be used in excess of the recommended capacities.

A fiber rope sling shall not be used if an end attachment in contact with the rope has a sharp edge or projection.

A fiber rope sling shall be immediately removed from service if any of the following conditions are present:

- Abnormal wear,
- Powdered fiber between strands,
- Broken or cut fibers,
- Variations in the size or the roundness of strands,
- Discoloration or rotting, or
- Distortion of hardware in the sling.

Only a fiber rope sling made from new rope shall be used. Use of repaired or reconditioned fiber rope sling is prohibited.

SYNTHETIC WEB SLINGS

Each sling shall be marked or coded to show the rated capacities for each type of hitch and synthetic web material.

Synthetic webbing shall be of uniform thickness and width, and salvage edges shall not be split from the webbing's width.

Fittings shall be:

- Of a minimum breaking strength equal to that of the sling,
- Free of all sharp edges that could in any way damage the webbing, and
- Using stitching as the only method to attach end fittings to webbing and to form eyes. The thread shall be in an even pattern and contain a sufficient number of stitches to develop the full breaking strength of the sling.

When a synthetic web sling is used, the following precautions shall be taken:

- A nylon web sling shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.
- A polyester and polypropylene web sling shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.
- A web sling with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.
- A synthetic web sling of polyester and nylon shall not be used at a temperature in excess of 180 degrees Fahrenheit. A polypropylene web sling shall not be used at a temperature in excess of 200 degrees Fahrenheit.

A synthetic web sling shall be immediately removed from service if any of the following conditions are present:

- Acid or caustic burns,
- Melting or charring of any part of the sling surface,
- Snags, punctures, tears or cuts,
- Broken or worn stitches, or
- Distortion of fittings.

A synthetic web sling shall be repaired only by the sling manufacturer.

A sling, including webbing and fittings, which has been repaired in a temporary manner shall not be used.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 49: Slings

FIRE PROTECTION AND PREVENTION

A portable fire extinguisher that has a rating of not less than 2A shall be provided for each 3,000-SF of the protected building area at each floor level and along the means of egress to facilitate the evacuation of employees. The travel distance to the nearest fire extinguisher shall not be more than 100 feet.

In multi-story buildings, at least one fire extinguisher shall be located adjacent to each stairway.

An extinguisher shall be located where it will be easily seen and readily accessible along normal paths of travel in the protected area.

In addition to the first bullet point of this section, fire extinguishers shall be supplied as follows:

- Outside of, but not more than ten feet from, a door opening to a room used for storage of flammable or combustible liquids,
- Not less than 25 feet, nor more than 75 feet, from an outside storage area, and
- On each tank truck or other vehicle used to transport or dispense flammable or combustible liquids.

An extinguisher shall be subjected to an annual maintenance check and inspected monthly, or at more frequent intervals when circumstances require, to ensure that all of the following provisions are complied with:

- The extinguisher has its designated place,
- The extinguisher has not been actuated or tampered with, and
- The extinguisher does not have obvious damage, physical damage, external corrosion or other impairment.

An extinguisher that shows defects which could affect its operation shall be removed from service and given a complete check.

An extinguisher shall have a tag attached to it showing the maintenance or recharge date as well as the initials or signature of the person who performed the service.

Fire extinguisher training is provided for employees who may use a fire extinguisher. The training will familiarize employees with the general principles of fire extinguisher use and the hazards associated with basic firefighting.

Employees who are expected to use fire extinguishers during an emergency will be trained during their orientation, and refresher training will be provided annually.

FLAMMABLE AND COMBUSTIBLE LIQUIDS - INSIDE STORAGE

Not more than 25 gallons of flammable or combustible liquid shall be stored within a room outside of an approved wood or metal cabinet.

Not more than 60 gallons of flammable liquids or 120 gallons of combustible liquids shall be stored in any one storage cabinet.

A cabinet used to store flammable and combustible liquids shall be labeled with conspicuous lettering, "FLAMMA- BLE – KEEP FIRE AWAY."

FLAMMABLE AND COMBUSTIBLE LIQUIDS - OUTSIDE STORAGE

Portable tanks stored outside shall not be closer than 20 feet from any building.
Within 200 feet of each portable tank, there shall be a 12-foot wide access way to permit the approach of a fire control apparatus.

An outside storage area for flammable and combustible liquids shall be graded in a manner to divert a possible spill away from a building or other hazard, or shall be surrounded by a curb or earth dike not less than 12 inches high.

An outside storage area for flammable or combustible liquid shall be kept free of weeds, papers, debris and other combustibles.

FLAMMABLE AND COMBUSTIBLE LIQUIDS - HANDLING AT POINT OF USE

Not more than a one day supply, not to exceed 25 gallons, of flammable or combustible liquid shall be permitted to stand outside of a cabinet at one time.

A flammable or combustible liquid shall not be used where there is open a flame or source of ignition within 50 feet of the liquid.

Leakage or spillage of a flammable or combustible liquid shall be disposed or without creating another hazard.

An open container holding a flammable liquid shall be equipped with a cover having a fused link that will automatically close if the liquid is ignited.

STORAGE OF L.P. GAS CONTAINERS - INDOORS

Storage of L.P. gas within buildings is prohibited.

HEATING DEVICES

A temporary heating device shall not produce combustion products that will increase the air contaminants above the maximum allowable limits.

A heating device, including a temporary heating device, shall be located at a distance sufficient to prevent ignition of any material in its proximity (or the material shall be insulated).

A temporary heating device shall not be located less than 50 feet from a point where a flammable or combustible liquid is used or dispensed.

A temporary heating device that is set on a combustible floor shall be separated from the floor by insulating material or one inch of concrete. The insulating material shall extend not less than two feet beyond the heater in all directions.

A temporary heating device shall be located not less than ten feet from a combustible covering, such as, but not limited to, canvas or tarpaulins, unless the covering is fastened to prevent its dislodgement due to wind action.

A temporary heating device shall be installed horizontally level.

A solid fuel salamander shall not be used in a building or on scaffolding.

A heating device, including a temporary heating device, using a liquid flammable fuel, such as, but not limited to, fuel oil or kerosene shall be equipped with a primary safety control to stop the flow of fuel if the flame fails. The device shall not be re-lit while the combustion chamber is hot.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 18: Fire Protection and Prevention Purpose

LOCK OUT/TAG OUT

This procedure establishes minimum standards for Lock Out/Tag Out. The goal is the prevention of mishaps caused by the accidental energization of equipment or release of stored energy.

SCOPE

This procedure applies to all TLC employees, all trade contractors and vendors performing work on company property or project sites, and all other individuals who are visiting or have business with our company.

RESPONSIBILITIES

Management is responsible for developing and periodically reviewing this program.

The safety director is responsible for appropriate employee training.

The safety director is responsible for enforcement of this program.

DEFINITIONS

Affected Employee: An employee working in an area where equipment is Locked and/or Tagged Out.
Authorized Employee: An employee who performs Lock and/or Tag Out.
Contractor: A non-company employee being paid to perform work in our facility or onsite.
Energy Sources: Mechanical, electrical, hydraulic, pneumatic, chemical, thermal, stored or other energy source.
Lock Out: Isolation of an energy control device by application of a lock to the energy control device that is in the off (or safe position) indicating that the control cannot be operated.
Stored Energy Source: Is a hidden energy source that is capable of releasing energy held against gravity, and hydraulic or pneumatic cylinders.
Tag Out: Isolation of an energy control device by application of a tag, without a lock, to the energy control device in the off (or safe) position indicating that the control cannot be operated.
Program Applications: Always use locks to achieve control of hazardous energy rather than tags except when an energy control device is not capable of being Locked Out.
Procedure
Energy Control Procedures: We maintain written energy control procedures for all equipment with the following exception; equipment with a single energy source where the machine has no stored or residual energy, no possibility of re-accumulating energy after shutdown, one energy source completely shuts down the machine, a single Lock Out device achieves full Lock Out under the control of the employee performing the work, the service does not create hazards for other employees and the single source equipment has never been involved in an accident. Written energy control procedures are available from the safety director. These procedures are always available to authorized employees.

ENERGY CONTROL HARDWARE

Locks: Each authorized employee will be assigned a sufficient number of locks to Lock Out the maximum number of energy control devices found on any equipment around which work is being performed. Only one key will be assigned for each lock.

Tags: Each authorized employee will be assigned a tag for each lock. Additional tags can be obtained from the safety director. Tags will always be used in conjunction with locks.

Other Equipment: Hasps, valve and plug covers, chains, cables and other equipment to facilitate Lock Out are available from the safety director.

PREPARATION FOR LOCK OUT

Prior to Lock Out, the authorized employee performing the task will do the following:

- Review the Energy Control Procedure for the piece of equipment,
- Be sure that all energy sources have been identified,
- Procure all hardware needed to Lock Out all energy control devices,
- Complete information on tags, and
- Notify the "owner" of the equipment to be Locked Out (e.g. department supervisor, lead person, operator, etc.)

LOCK OUT SEQUENCE

Shut down all energy sources using normal stopping/shut down devices (stop buttons, switches, valves, etc.).

Isolate energy sources by applying a lock and tag to each control device. (Note: devices not capable of being locked will have a tag applied to the device or as close as possible to it.)

Stored energy must be dissipated or restrained.

Verify the energy isolation of the equipment by attempting to operate the machine using the normal operating con- trols. (Note: check to be sure that it would be safe if restart actually happened.) Return the operating controls to off or safe.

Barricade the work area as necessary and perform the work.

RESTORATION OF ENERGY

Inspect the equipment to be sure that all tools, parts, etc. have been removed as necessary from the equipment.

Replace guards, restore machine controls, etc.

Notify the equipment "owner(s)" and other employees in the area.

Remove locks, tags, etc.

Test operation of the equipment.

Release equipment back to the "owner(s)".

MULTIPLE EMPLOYEE LOCK OUT

When more than one employee is assigned to work on the same piece of equipment, each employee will apply his/her own lock and tag to each energy control device. In cases where an energy control device cannot accept multiple locks a hasp or lock box may be used. In the case of a lock box, each energy control device will be secured with one lock but the key will be locked in a box that is capable of accepting the lock of every employee assigned to perform the work. The key cannot be obtained until all assigned employees have removed their locks.

SHIFT CHANGE OR EMPLOYEE REASSIGNMENT

Whenever a job extends from one shift to the next, a change-over period will be established where the two or more employee's may change locks. The off-going employee will remove their locks and the on-coming personnel will apply theirs. Prior to doing any work, the on-coming employee(s) will verify that all energy sources are safe and Locked Out. If an authorized employee is not available at shift change, a supervisor may serve as the on-coming shift employee.

EMERGENCY LOCK REMOVAL

Whenever management determines that a lock must be removed, the owner must be notified. If the lock owner is not in the plant, the following steps must be taken:

- Call the lock owner at home and/or on his mobile. if an answering machine is in use, leave an appropriate message,
- The supervisor, or another member of management, will meet the employee at the entrance during the next scheduled shift and advise of the lock removal, and
- The cut off lock will be placed on the owner's work bench or tool box along with a note that explains where the lock(s) was (were) removed.

JOB SPECIFIC LOCK OUT/TAG OUT PROCEDURES

Any job requiring Lock Out/Tag Out procedures shall have a written plan POSTED at the project site.

TRADE CONTRACTORS

Trade Contractors will be required to submit a copy of their company's lock out plan to our safety direct or which must meet or exceed the Lock Out/Tag Out requirements outlined in this manual. TLC reserves the right to require that trade contractors use our procedures if they are more protective than the trade contractor program.

TRAINING

Authorized employees will be trained, at the time of hire or reassignment, in the following ways:

- Recognition of hazardous energy sources,
- Type and magnitude of energy in the facility, and
- Methods and hardware available for energy isolation and control.

Affected employees, and employees who may work in areas where equipment is locked out, will be trained to recognize Lock Out locks and tags at the time of hire or assignment.

Training will include the purpose and use of energy control procedure.

Under NO circumstances is ANYONE to remove a Lock and/or Tag other than the person who applied it.

For authorized and affected employees, retraining will be provided as follows:

- When a periodic inspection reveals a need for retraining,
- When a new hazard is identified,
- When the procedure changes, or
- When the program administrator determines that there is a need for additional training.

INSPECTIONS

A periodic inspection of the energy control procedure shall be conducted at least annually to ensure the procedure is being followed. The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected. The periodic inspection shall be conducted to correct any deviations or inadequacies identified. Where lock out is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected.

Where tag out is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure.

Periodic (annual) inspections that have been performed must be certified. The certification shall identify the ma- chine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection and the person performing the inspection

CONFINED SPACE POLICY

Welcome to the "Confined Space" section of the Taylor Davis Landscape & Construction Safety Manual. The safety and well-being of our employees is our utmost priority. This comprehensive guide has been created to educate and inform our workforce about the unique challenges and precautions associated with working in confined spaces.

WHY IS THIS SECTION IMPORTANT?

Confined spaces can present significant hazards, including limited entry and exit points, atmospheric dangers, and the potential for engulfment, entrapment, or other life-threatening situations. Understanding how to work safely in these environments is essential for protecting both our employees and the integrity of our operations.

In this section, you will find a thorough overview of confined spaces, regulatory guidelines that govern them, methods for identifying them, and the critical steps and precautions to take when working within or around confined spaces. We will also cover emergency response procedures and the equipment and personal protective gear required to ensure your safety.

By following the guidelines and recommendations in this section, you can help create a secure working environment and ensure that you and your fellow employees return home safely every day.

Remember, safety is not a choice; it is a commitment we make to ourselves, our colleagues, and our families. If you have any questions or need further clarification on any topic discussed in this section, please do not hesitate to reach out to our Safety Department or your immediate supervisor.

Thank you for your dedication to safety and for taking the time to familiarize yourself with the essential information in this "Confined Space" section. Your vigilance and knowledge will contribute to a safer and more secure workplace for all.

WHAT IS A CONFINED SPACE?

It's vital that we all know what is meant by a Confined Space. In order for a space to be classified as a confined space it must possess ALL OF THE FOLLOWING 3 CRITERIA.

- The space must be large enough for a worker to enter that is, it must have a diameter of at least 18 inches round. Keep in mind any opening smaller than an 18 inch diameter round is considered too small to ever enter and shall not ever be entered.
- The space must have a limited or restricted means of entry and exit. This typically means that a worker has to contort their body to enter, such as crouching, bending, crawling and kneeling to enter the space. A non-Standard doorway a hatchway, scuttle, manhole, inspection port including spaces only accessible by ladders, concrete-mounted rungs or hoisting devices. A space with a limited number of means of egress, such as single way in and out may constitute a limited means of entry and exit.
- The space was not designed for continuous occupancy. Even if occasionally workers will enter the space for inspection, repair, clean-up and maintenance the space may still not be designed for continuous occupancy.

Product storage areas, enclosed machinery, vessel tanks, ceiling plenums, attics and crawl spaces are **NOT** designed for continuous occupancy and hence fulfill this prohibiting design criterion.

Other typical confined spaces are boilers, furnaces, ceilings, pipelines, ducts, pits, pumping stations, process vessels, septic tanks, trenches, excavations, silos, storage tanks, barges, sewers, utility vaults, shafts and caissons. Such spaces may include areas above ceilings, catwalks, catacomb or maze-like paths or areas below a raised stage or electronic floor, cubbyholes or sub-basements.

Our activity or the materials we use may also affect our working environment and create confined spaces or permit required confined spaces. When accessing certain areas to work, we must be deliberate when staging where we work and how we are going to access such work.

For example if we were to have to work, as Michelangelo did on the Sistine Chapel, lying on our backs, this area can conceivably become a confined space. Use this as a basis of

consideration; ***if you have to work in a position or location where it would become difficult for rescuers to extricate you from that space in an emergency, then you are probably in a confined space.***

We as a team, through our competent persons, must also say something if we see something, that is, if we recognize various spaces in our work environments that resemble what we have described here, we must tell our competent persons and avoid entry until the space is assessed and classified accordingly.

WHAT IS A PERMIT REQUIRED CONFINED SPACE?

While we can ordinarily deal with typical confined spaces in the workplace the stakes get much greater if the confined spaces possess additional hazards that can cause Immediate Danger of Life or Health, known as an IDLH. These extremely dangerous spaces can only be entered with extreme precautions and under the permission of a permit created specifically for the hazards associated with the space.

In these cases, entrants, attendants, supervisors and competent persons must receive extensive site and hazard specific training that effectively teaches workers about the specific hazards and the planning to control the hazard from doing harm. Training will also include how to monitor hazards and emergency measures to be taken to rescue entrants.

In order for a confined space to be classified as a permit required confined space it must ONLY need to possess or have the potential to possess **ONE** of the following criteria.

- The space contains or has the potential to contain a hazardous atmosphere. This means the space may have or possess the potential to have an enriched or depleted oxygen atmosphere, a toxic atmosphere containing a harmful substance or chemical, a combustible or harmful dust atmosphere or a flammable atmosphere.
- The space contains or has the potential to contain a material that can engulf an entrant such as steam, water, sewage, grain or soil.
- The space contains has a design that possess a configuration that could trap or asphyxiate an entrant. Such configuration may include internal walls or baffles, nooks, ducts or obstructions to egress that would make emergency extrication difficult or time consuming.
- The fourth criteria is intentionally open-ended and includes any serious safety or health concern that may be within a space or can potentially come into existence in the space.

These hazards pose a threat to life or health (IDLH) and can be electrical hazards, pests, animals, ionizing radiation, impalements, punctures, falls, caught-in- between and struck-by hazards and various non-atmospheric chemicals.

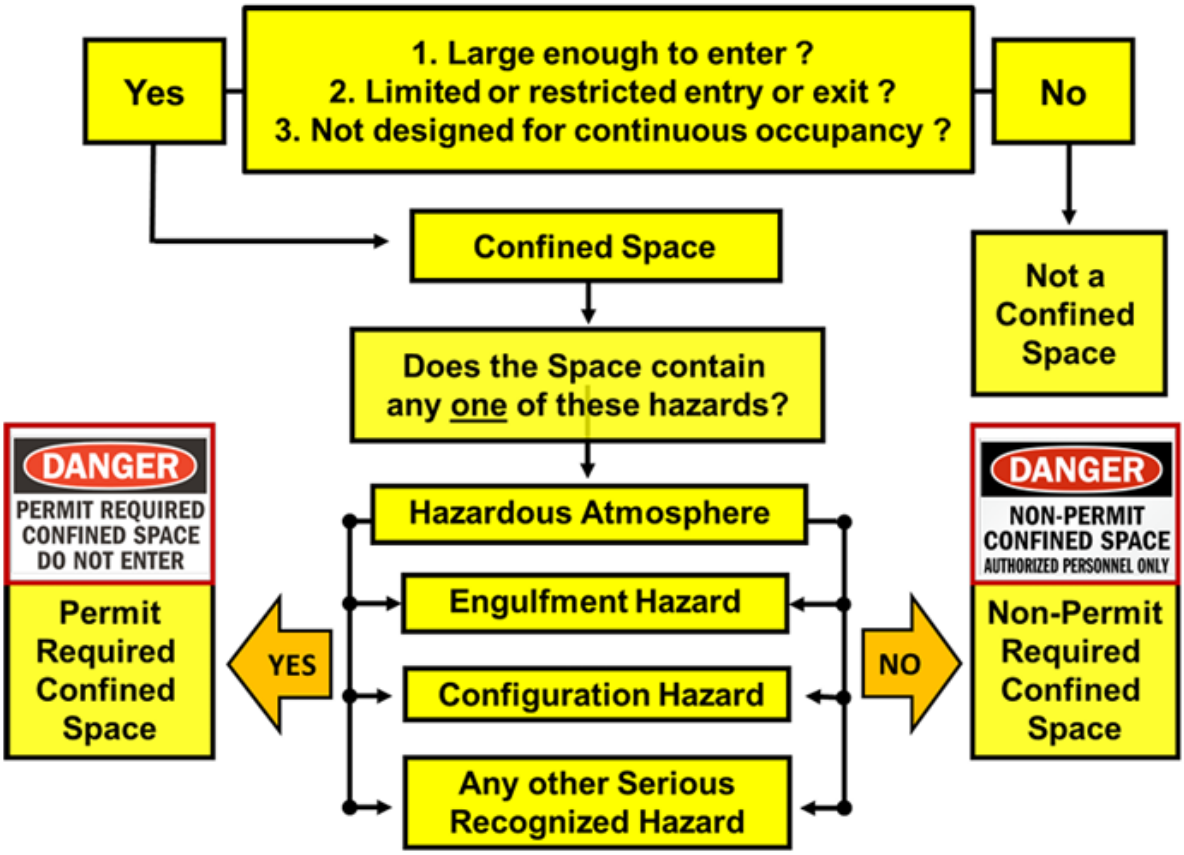
A permit documents the steps taken to control or eliminate the hazard before entry is made, and serves as a guideline for acceptable entry conditions.

Here are some key points and important definitions you MUST remember:

- Before you begin working at a worksite you must be informed by your competent person about confined spaces that you may be directed to work in or near. These spaces must be identified by specific hazards.
- If there are permit required confined spaces at your site they must possess signage or other means of prohibiting unauthorized entry the sign may say "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" or use other similar language.
- Remember the chemicals we us or the activities we perform in a space can introduce a new hazard that would make that space into a confined space or a permit required confined space. For example hot work, which is any task that produces a spark, arc, or any other ignition source such as molten metal.
- Permit required confined spaces possess or can possibly possess hazards that can immediately cause death or serious sickness or injury. We refer to such hazards as "IDLH's," which stands for "Immediate Danger of Life or Health."
- Entry into a confined or permit required confined space means any body part that breaks the plane or opening to the space. Reaching into a space with your hand or arm would constitute and entry.
- A Competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them. You MUST have a competent person at your site at all times.
- The Controlling Contractor is the employer that has overall responsibility for construction at the worksite. This is typically the General Contractor. If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer.
- The Host employer means the employer that owns or manages the property where you are working.
- A Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment, injury, or illness from such hazards as flammable gases, combustible dusts, atmospheric oxygen concentration below 19.5 percent or above 23.5 percent and concentrations of recognized toxic and hazardous substance or any other atmospheric condition that is immediately dangerous to life or health.

CONFINED SPACE IDENTIFICATION FLOW CHART

Here is a simple flow chart that can help you better understand how we classify confined and permit required confined spaces. If you have any questions please ask your competent person.



SCOPE

This Standard sets forth requirements for practices and procedures to protect employees engaged in construction activities at a worksite with one or more confined spaces, subject to the exceptions in paragraph (b) of this section.

Note to paragraph §1926.1201(a). Examples of locations where confined spaces may occur include, but are not limited to, the following: Bins; boilers; pits (such as elevator, escalator, pump, valve or other equipment); manholes (such as sewer, storm drain, electrical, communication, or other utility); tanks (such as fuel, chemical, water, or other liquid, solid or gas); incinerators; scrubbers; concrete pier columns; sewers; transformer vaults; heating, ventilation, and air-conditioning (HVAC) ducts; storm drains; water mains; precast concrete and other pre-formed manhole units; drilled shafts; enclosed beams; vessels; digesters; lift stations; cesspools; silos; air receivers; sludge gates; air preheaters; step up transformers; turbines; chillers; bag houses; and/or mixers/reactors.

Exceptions. This Standard does not apply to: (1) Construction work regulated by §1926 subpart P—Excavations. (2) Construction work regulated by §1926 subpart S—Underground Construction, Caissons, Cofferdams and Compressed Air. (3) Construction work regulated by §1926 subpart Y—Diving.

Where this Standard applies and there is a provision that addresses a confined space hazard in another applicable OSHA Standard, the employer must comply with both that requirement and the applicable provisions of this Standard.

§1926.1202 Definitions.

The following terms are defined for the purposes of this subpart only:

- Acceptable entry conditions means the conditions that must exist in a permit space, before an employee may enter that space, to ensure that employees can safely enter into, and safely work within, the space.
- Attendant means an individual stationed outside one or more permit spaces who assesses the status of authorized entrants and who must perform the duties specified in §1926.1209.
- Authorized entrant means an employee who is authorized by the entry supervisor to enter a permit space.

- Barrier means a physical obstruction that blocks or limits access.
- Blanking or blinding means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
- Competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Confined space means a space that:

- Is large enough and so configured that an employee can bodily enter it;
- Has limited or restricted means for entry and exit; and
- Is not designed for continuous employee occupancy.
- Control means the action taken to reduce the level of any hazard inside a confined space using engineering methods (for example, by ventilation), and then using these methods to maintain

the reduced hazard level. Control also refers to the engineering methods used for this purpose. Personal protective equipment is not a control.

Controlling Contractor is the employer that has overall responsibility for construction at the worksite. Note. If the controlling contractor owns or manages the property, then it is both a controlling employer and a host employer.

Double block and bleed means the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Early-warning system means the method used to alert authorized entrants and attendants that an engulfment hazard may be developing. Examples of early-warning systems include, but are not limited to: alarms activated by remote sensors; and lookouts with equipment for immediately communicating with the authorized entrants and attendants.

Emergency means any occurrence (including any failure of power, hazard control or monitoring equipment) or event, internal or external, to the permit space that could endanger entrants.

Engulfment means the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, crushing, or suffocation.

Entry means the action by which any part of a person passes through an opening into a permit- required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space, whether or not such action is intentional or any work activities are actually performed in the space.

Entry Employer means any employer who decides that an employee it directs will enter a permit space.

Note. An employer cannot avoid the duties of the Standard merely by refusing to decide whether its employees will enter a permit space, and OSHA will consider the failure to so decide to be an implicit decision to allow employees to enter those spaces if they are working in the proximity of the space.

Entry permit (permit) means the written or printed document that is provided by the employer who designated the space a permit space to allow and control entry into a permit space and that contains the information specified in §1926.1206 of this Standard.

Entry rescue occurs when a rescue service enters a permit space to rescue one or more employees.

Entry supervisor means the qualified person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this Standard. Note. An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this Standard for each role he or she fills.

Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

Hazard means a physical hazard or hazardous atmosphere. See definitions below.
Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
- Airborne combustible dust at a concentration that meets or exceeds its LFL; Note: This concentration may be approximated as a condition in which the combustible dust obscures vision at a distance of 5 feet (1.52 meters) or less.
- Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
- Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart D—Occupational Health and Environmental Control, or in Subpart Z—Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of its dose or permissible exposure limit; Note. An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this definition.
- Any other atmospheric condition that is immediately dangerous to life or health. Note. For air contaminants for which OSHA has not determined a dose or permissible exposure limit, other sources of information, such as Safety Data Sheets that comply with the Hazard

Communication Standard

§1926.59 of this part, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.
Host employer means the employer that owns or manages the property where the construction work is taking place.
Note. If the owner of the property on which the construction activity occurs has contracted with an entity for the general management of that property, and has transferred to that entity the information specified in §1203(h)(1), OSHA will treat the contracted management entity as the host employer for as long as that entity manages the property. Otherwise, OSHA will treat the owner of the property as the host employer. In no case will there be more than one host employer.

Hot work means operations capable of providing a source of ignition (for example, riveting, welding, cutting, burning, and heating).

Immediately dangerous to life or health (IDLH) means any condition that would interfere with an individual's ability to escape unaided from a permit space and that poses a threat to life or that would cause irreversible adverse health effects.
Note. Some materials—hydrogen fluoride gas and cadmium vapor, for example—may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" after recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

Inerting means displacing the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.
Note. This procedure produces an IDLH oxygen-deficient atmosphere.

Isolate or isolation means the process by which employees in a confined space are completely protected against the release of energy and material into the space, and contact with a physical hazard, by such means as: blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; blocking or disconnecting all mechanical linkages; or placement of barriers to eliminate the potential for employee contact with a physical hazard.

Limited or restricted means for entry or exit means a condition that has a potential to impede an employee's movement into or out of a confined space. Such conditions include, but are not limited to, trip hazards, poor illumination, slippery floors, inclining surfaces and ladders.

Line breaking means the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing injury.

Lockout means the placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lower _ flammable limit or lower explosive limit means the minimum concentration of a substance in air needed for an ignition source to cause a flame or explosion.

Monitor or monitoring means the process used to identify and evaluate the hazards after an authorized entrant enters the space. This is a process of checking for changes that is performed in a periodic or continuous manner after the completion of the initial testing or evaluation of that space.

Non-entry rescue occurs when a rescue service, usually the attendant, retrieves employees in a permit space without entering the permit space.

Non-permit confined space means a confined space that meets the definition of a confined space but does not meet the requirements for a permit-required confined space, as defined in this subpart.

Oxygen deficient atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics: (1) Contains or has a 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

Contains any other recognized serious safety or health hazard.

Permit-required confined space program (permit space program) means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

Physical hazard means an existing or potential hazard that can cause death or serious physical damage. Examples include, but are not limited to: explosives (as defined by paragraph (n) of §1926.914, definition of "explosive"); mechanical, electrical, hydraulic and pneumatic energy; radiation; temperature extremes; engulfment; noise; and inwardly converging surfaces.

Physical hazard also includes chemicals that can cause death or serious physical damage through skin or eye contact (rather than through inhalation).

Prohibited condition means any condition in a permit space that is not allowed by the permit during the period when entry is authorized. A hazardous atmosphere is a prohibited condition unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee.

Qualified person means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Representative _permit space means a mock-up of a confined space that has entrance openings that are similar to, and is of similar size, configuration, and accessibility to, the permit space that authorized entrants enter.

Rescue means retrieving, and providing medical assistance to, one or more employees who are in a permit space.

Rescue service means the personnel designated to rescue employees from permit spaces.

Retrieval system means the equipment (including a retrieval line, chest or full body harness, wristlets or anklets, if appropriate, and a lifting device or anchor) used for non¬entry rescue of persons from permit spaces.

Serious physical damage means an impairment or illness in which a body part is made functionally useless or is substantially reduced in efficiency. Such impairment or illness may be permanent or temporary and includes, but is not limited to, loss of consciousness, disorientation, or other immediate and substantial reduction in mental efficiency. Injuries involving such impairment would usually require treatment by a physician or other licensed health-care professional.

Tagout means:(1) Placement of a tagout device on a circuit or equipment that has been deenergized, in accordance with an established procedure, to indicate that the circuit or equipment being controlled may not be operated until the tagout device is removed; and (2) The employer ensures that (i) tagout provides equivalent protection to lockout, or (ii) that lockout is infeasible and the employer has relieved, disconnected, restrained and otherwise rendered safe stored (residual) energy.

Test or testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

Note. Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

Ventilate or ventilation means controlling a hazardous atmosphere using continuous forced-air mechanical systems that meet the requirements of §1926.57—Ventilation.
§1926.1203 General requirements.

Before it begins work at a worksite, each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.
If the workplace contains one or more permit spaces, the employer who identifies, or who receives notice of, a permit space must:

- Inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space; and Note to paragraph §1926.1203(b)(1). A sign reading "DANGER -- PERMIT- REQUIRED CONFINED SPACE, DO NOT ENTER" or using other similar language would satisfy the requirement for a sign.
- Inform, in a timely manner and in a manner other than posting, its employees' authorized representatives and the controlling contractor of the existence and location of, and the danger posed by, each permit space.
- Each employer who identifies, or receives notice of, a permit space and has not authorized employees it directs to work in that space must take effective measures to prevent those employees from entering that permit space, in addition to complying with all other applicable requirements of this Standard.
- If any employer decides that employees it directs will enter a permit space, that employer must have a written permit space program that complies with §1926.1204

implemented at the construction site. The written program must be made available prior to and during entry operations for inspection by employees and their authorized representatives.

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An employer may use the alternate procedures specified in paragraph §1926.1203(e)(2) for entering a permit space only under the conditions set forth in paragraph §1926.1203(e)(1).

An employer whose employees enter a permit space need not comply with §§1926.1204 through 1206 and §§1926.1208 through 1211, provided that all of the following conditions are met:

The employer can demonstrate that all physical hazards in the space are eliminated or isolated through engineering controls so that the only hazard posed by the permit space is an actual or potential hazardous atmosphere;

The employer can demonstrate that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry, and that, in the event the ventilation system stops working, entrants can exit the space safely;

The employer develops monitoring and inspection data that supports the demonstrations required by paragraphs §1926.1203(e)(1)(i) and §1926.1203(e)(1)(ii);

If an initial entry of the permit space is necessary to obtain the data required by paragraph §1926.1203(e)(1)(iii), the entry is performed in compliance with §§1926.1204 through 1211 of this Standard; The determinations and supporting data required by paragraphs §1926.1203(e)(1)(i), (e)(1)(ii), and (e)(1)(iii) are documented by the employer and are made available to each employee who enters the permit space under the terms of paragraph §1926.1203(e) or to that employee's authorized representative; and Entry into the permit space under the terms of paragraph §1926.1203(e)(1) is performed in accordance with the requirements of paragraph §1926.1203(e)(2).

Note to paragraph §1926.1203(e)(1). See paragraph §1926.1203(g) for reclassification of a permit space after all hazards within the space have been eliminated.

The following requirements apply to entry into permit spaces that meet the conditions set forth in paragraph §1926.1203(e)(1):

- Any conditions making it unsafe to remove an entrance cover must be eliminated before the cover is removed.
- When entrance covers are removed, the opening must be immediately guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.
- Before an employee enters the space, the internal atmosphere must be tested, with a calibrated direct-reading instrument, for oxygen content, for flammable gases and vapors, and for potential toxic air contaminants, in that order. Any employee who enters the space, or that employee's authorized representative, must be provided an opportunity to observe the pre- entry testing required by this paragraph.
- No hazardous atmosphere is permitted within the space whenever any employee is inside the space.

- Continuous forced air ventilation must be used, as follows:
- An employee must not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
- The forced air ventilation must be so directed as to ventilate the immediate areas where an employee is or will be present within the space and must continue until all employees have left the space;
- The air supply for the forced air ventilation must be from a clean source and must not increase the hazards in the space.
- The atmosphere within the space must be continuously monitored unless the entry employer can demonstrate that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. If continuous monitoring is used, the employer must ensure that the monitoring equipment has an alarm that will notify all entrants if a specified atmospheric threshold is achieved, or that an employee will check the monitor with sufficient frequency to ensure that entrants have adequate time to escape. If continuous monitoring is not used, periodic monitoring is required. All monitoring must ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere. Any employee who enters the space, or that employee's authorized representative, must be provided with an opportunity to observe the testing required by this paragraph.

If a hazard is detected during entry:

- Each employee must leave the space immediately;
- The space must be evaluated to determine how the hazard developed; and
- The employer must implement measures to protect employees from the hazard before any subsequent entry takes place.
- The employer must ensure a safe method of entering and exiting the space. If a hoisting system is used, it must be designed and manufactured for personnel hoisting; however, a job- made hoisting system is permissible if it is approved for personnel hoisting by a registered professional engineer, in writing, prior to use.
- The employer must verify that the space is safe for entry and that the pre¬entry measures required by paragraph §1926.1203(e)(2) have been taken, through a written certification that contains the date, the location of the space, and the signature of the person

- providing the certification. The certification must be made before entry and must be made available to each employee entering the space or to that employee's authorized representative.
- When there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, or some indication that the initial evaluation of the space may not have been adequate, each entry employer must have a competent person reevaluate that space and, if necessary, reclassify it as a permit- required confined space.
- A space classified by an employer as a permit-required confined space may only be reclassified as a non-permit confined space when a competent person determines that all of the applicable requirements in paragraphs §1926.1203(g)(1) through (g)(4) have been met:
- If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated or isolated without entry into the space (unless the employer can demonstrate that doing so without entry is infeasible), the permit space

may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated or isolated;

- The entry employer must eliminate or isolate the hazards without entering the space, unless it can demonstrate that this is infeasible. If it is necessary to enter the permit space to eliminate or isolate hazards, such entry must be performed under §§1926.1204 through 1211 of this Standard. If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated or isolated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated or isolated; Note to paragraph §1926.1203(g)(2). Control of atmospheric hazards through forced air ventilation does not constitute elimination or isolation of the hazards. Paragraph §1926.1203(e) covers permit space entry where the employer can demonstrate that forced air ventilation alone will control all hazards in the space.
- The entry employer must document the basis for determining that all hazards in a permit space have been eliminated or isolated, through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification must be made available to each employee entering the space or to that employee's authorized representative; and
- If hazards arise within a permit space that has been reclassified as a non- permit space under paragraph §1926.1203(g), each employee in the space must exit the space. The entry employer must then reevaluate the space and reclassify it as a permit space as appropriate in accordance with all other applicable provisions of this Standard.

PERMIT SPACE ENTRY COMMUNICATION AND COORDINATION:

Before entry operations begin, the host employer must provide the following information, if it has it, to the controlling contractor:

- The location of each known permit space;
- The hazards or potential hazards in each space or the reason it is a permit space; and
- Any precautions that the host employer or any previous controlling contractor or entry employer implemented for the protection of employees in the permit space. Before entry operations begin, the controlling contractor must:
- Obtain the host employer's information about the permit space hazards and previous entry operations; and
- Provide the following information to each entity entering a permit space and any other entity at the worksite whose activities could foreseeably result in a hazard in the permit space:
    - The information received from the host employer;
    - Any additional information the controlling contractor has about the subjects listed in paragraph (h)(1) of this section; and

- The precautions that the host employer, controlling contractor, or other entry employers implemented for the protection of employees in the permit spaces.

Before entry operations begin, each entry employer must:

- Obtain all of the controlling contractor's information regarding permit space hazards and entry operations; and
- Inform the controlling contractor of the permit space program that the entry employer will follow, including any hazards likely to be confronted or created in each permit space.

- The controlling contractor and entry employer(s) must coordinate entry operations when:
- More than one entity performs permit space entry at the same time; or
- Permit space entry is performed at the same time that any activities that could foreseeably result in a hazard in the permit space are performed.

After entry operations:

- The controlling contractor must debrief each entity that entered a permit space regarding the permit space program followed and any hazards confronted or created in the permit space(s) during entry operations;

- The entry employer must inform the controlling contractor in a timely manner of the permit space program followed and of any hazards confronted or created in the permit space(s) during entry operations; and
- The controlling contractor must apprise the host employer of the information exchanged with the entry entities pursuant to this subparagraph. Note to paragraph §1926.1203(h). Unless a host employer or controlling contractor has or will have employees in a confined space, it is not required to enter any confined space to collect the information specified in this paragraph (h).
- If there is no controlling contractor present at the worksite, the requirements for, and role of, controlling contactors in §1926.1203 must be fulfilled by the host employer or other employer who arranges to have employees of another employer perform work that involves permit space entry.
- §1926.1204 Permit-Required Confined Space Program. Each entry employer must:
- Implement the measures necessary to prevent unauthorized entry;
- Identify and evaluate the hazards of permit spaces before employees enter them;
- Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following:
- Specifying acceptable entry conditions;
- Providing each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces;
- Isolating the permit space and physical hazard(s) within the space;
- Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards; Note to paragraph §1204(c)(4). When an employer is unable to reduce the atmosphere below 10 percent LFL, the employer may only enter if the employer inerts the space so as to render the entire atmosphere in the space noncombustible, and the employees use PPE to address any other atmospheric hazards (such as oxygen deficiency), and the employer eliminates or isolates all physical hazards in the space.

- Determining that, in the event the ventilation system stops working, the monitoring procedures will detect an increase in atmospheric hazard levels in sufficient time for the entrants to safely exit the permit space;
- Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards;
- Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry, and ensuring that employees are not allowed to enter into, or remain in, a permit space with a hazardous atmosphere unless the employer can demonstrate that personal protective equipment (PPE) will provide effective protection for each employee in the permit space and provides the appropriate PPE to each employee; and
- Eliminating any conditions (for example, high pressure) that could make it unsafe to remove an entrance cover.

- Provide the following equipment (specified in paragraphs §1926.1204(d)(1) through (9)) at no cost to each employee, maintain that equipment properly, and ensure that each employee uses that equipment properly:
- Testing and monitoring equipment needed to comply with paragraph §1926.1204(e);
- Ventilating equipment needed to obtain acceptable entry conditions;
- Communications equipment necessary for compliance with paragraphs §1926.1208(c) and §1926.1209(e), including any necessary electronic communication equipment for attendants assessing entrants' status in multiple spaces;
- Personal protective equipment insofar as feasible engineering and work- practice controls do not adequately protect employees; Note to paragraph §1926.1204(d)(4). The requirements of subpart E of this part and other PPE requirements continue to apply to the use of PPE in a permit space. For example, if employees use respirators, then the respirator requirements in §1926.103 (Respiratory protection) must be met.
- Lighting equipment that meets the minimum illumination requirements in §1926.56, that is approved for the ignitable or combustible properties of the specific gas, vapor, dust, or fiber that will be present, and that is sufficient to enable employees to see well enough to work safely and to exit the space quickly in an emergency;
- Barriers and shields as required by paragraph §1926.1204(c)(4);
- Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;
- Rescue and emergency equipment needed to comply with paragraph §1926.1204(i), except to the extent that the equipment is provided by rescue services; and
- Any other equipment necessary for safe entry into, safe exit from, and rescue from, permit spaces.

Evaluate permit space conditions in accordance with the following paragraphs (e)(1) through (6) of this section when entry operations are conducted:

- Test conditions in the permit space to determine if acceptable entry conditions exist before changes to the space's natural ventilation are made, and before entry is authorized to begin, except that, if an employer demonstrates that isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), the employer must:
    - Perform pre-entry testing to the extent feasible before entry is authorized; and,
    - If entry is authorized, continuously monitor entry conditions in the areas where authorized entrants are working, except that employers may use periodic monitoring in accordance with paragraph §1926.1204(e)(2) for monitoring an atmospheric hazard if they can demonstrate that equipment for continuously monitoring that hazard is not commercially available;
    - Provide an early-warning system that continuously monitors for non-isolated engulfment hazards. The system must alert authorized entrants and attendants in sufficient time for the authorized entrants to safely exit the space.
    - Continuously monitor atmospheric hazards unless the employer can demonstrate that the equipment for continuously monitoring a hazard is not commercially available or that periodic monitoring is of sufficient frequency to ensure that the atmospheric hazard is being controlled at safe levels. If continuous monitoring is not used, periodic monitoring is required with sufficient frequency to ensure that acceptable entry conditions are being maintained during the course of entry operations;
        - When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors;

- Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces;
- Reevaluate the permit space in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such reevaluation because there is some indication that the evaluation of that space may not have been adequate; and
- Immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted in accordance with §1926.1204 of this Standard.
- Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations;
- Attendants may be assigned to more than one permit space provided the duties described in §1926.1209 of this Standard can be effectively performed for each permit space.
- Attendants may be stationed at any location outside the permit space as long as the duties described in §1926.1209 of this Standard can be effectively performed for each permit space to which the attendant is assigned.

If multiple spaces are to be assigned to a single attendant, include in the permit program the means and procedures to enable the attendant to respond to an emergency affecting one or more of those permit spaces without distraction from the attendant's responsibilities under §1926.1209 of this Standard;

- Designate each person who is to have an active role (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required by §1926.1207 of this Standard;
- Develop and implement procedures for summoning rescue and emergency services (including procedures for summoning emergency assistance in the event of a failed non-entry rescue), for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, and for preventing unauthorized personnel from attempting a rescue;
- Develop and implement a system for the preparation, issuance, use, and cancellation of entry permits as required by this Standard, including the safe termination of entry operations under both planned and emergency conditions;
- Develop and implement procedures to coordinate entry operations, in consultation with the controlling contractor, when employees of more than one employer are working simultaneously in a permit space or elsewhere on the worksite where their activities could, either alone or in conjunction with the activities within a permit space, foreseeably result in a hazard within the confined space, so that employees of one employer do not endanger the employees of any other employer;
- Develop and implement procedures (such as closing off a permit space and canceling the permit) necessary for concluding the entry after entry operations have been completed;

Review entry operations when the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized; and the occurrence of an injury or near-miss during entry,

a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program.

Review the permit space program, using the canceled permits retained under paragraph §1926.1205(f), within 1 year after each entry and revise the program as necessary to ensure that employees participating in entry operations are protected from permit space hazards. Note to paragraph §1926.1204(m).

Examples of circumstances requiring the review of the permit space program include, but are not limited to: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit,

Note to paragraph §1926.1204(n). Employers may perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review is necessary.

PERMITTING PROCESS.

Before entry is authorized, each entry employer must document the completion of measures required by paragraph §1926.1204(c) of this Standard by preparing an entry permit. Before entry begins, the entry supervisor identified on the permit must sign the entry permit to authorize entry.

The completed permit must be made available at the time of entry to all authorized entrants or their authorized representatives, by posting it at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry preparations have been completed.

The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit in accordance with paragraph §1926.1206(b) of this Standard.

The entry supervisor must terminate entry and take the following action when any of the following apply:

- Cancel the entry permit when the entry operations covered by the entry permit have been completed; or
- Suspend or cancel the entry permit and fully reassess the space before allowing reentry when a condition that is not allowed under the entry permit arises in or near the permit space and that condition is temporary in nature and does not change the configuration of the space or create any new hazards within it; and
- Cancel the entry permit when a condition that is not allowed under the entry permit arises in or near the permit space and that condition is not covered by subparagraph (e)(2) of this section.
- The entry employer must retain each canceled entry permit for at least 1 year to facilitate the review of the permit-required confined space program required by paragraph §1926.1204(n) of this Standard. Any problems encountered during an entry operation must be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

ENTRY PERMIT.

The entry permit that documents compliance with this section and authorizes entry to a permit space must identify:

- The permit space to be entered;
- The purpose of the entry;
- The date and the authorized duration of the entry permit;
- The authorized entrants within the permit space, by name or by such other means (for example, through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space; Note to paragraph §1926.1206(d). This requirement may be met by inserting a reference on the entry permit as to the means used, such as a roster or tracking system, to keep track of the authorized entrants within the permit space.
- Means of detecting an increase in atmospheric hazard levels in the event the ventilation system stops working;
- Each person, by name, currently serving as an attendant;
- The individual, by name, currently serving as entry supervisor, and the signature or initials of each entry supervisor who authorizes entry;
- The hazards of the permit space to be entered;
- The measures used to isolate the permit space and to eliminate or control permit space hazards before entry; Note to paragraph §1926.1206(i). Those measures can include, but are not limited to, the lockout or tagging of equipment and procedures for purging, inerting, ventilating, and flushing permit spaces.
- The results of tests and monitoring performed under paragraph §1926.1204(e) of this Standard, accompanied by the names or initials of the testers and by an indication of when the tests were performed;
- The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services;
- The communication procedures used by authorized entrants and attendants to maintain contact during the entry;

Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this Standard; Any other information necessary, given the circumstances of the particular confined space, to ensure employee safety; and
Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.

TRAINING

The employer must provide training to each employee whose work is regulated by this Standard, at no cost to the employee, and ensure that the employee possesses the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this Standard. This training must result in an understanding of the hazards in the permit space and the methods used to isolate, control or in other ways protect employees from these hazards, and for those employees not authorized to perform entry rescues, in the dangers of attempting such rescues.

Training required by this section must be provided to each affected employee:

- In both a language and vocabulary that the employee can understand;
- Before the employee is first assigned duties under this Standard;
- Before there is a change in assigned duties;
- Whenever there is a change in permit space entry operations that presents a hazard about which an employee has not previously been trained; and

- Whenever there is any evidence of a deviation from the permit space entry procedures required by paragraph §1926.1204(c) of this Standard or there are inadequacies in the employee's knowledge or use of these procedures.
- The training must establish employee proficiency in the duties required by this Standard and must introduce new or revised procedures, as necessary, for compliance with this Standard.
- The employer must maintain training records to show that the training required by paragraphs §1926.1207(a) through (c) of this Standard has been accomplished. The training records must contain each employee's name, the name of the trainers, and the dates of training. The documentation must be available for inspection by employees and their authorized representatives, for the period of time the employee is employed by that employer.

DUTIES OF AUTHORIZED ENTRANTS

The entry employer must ensure that all authorized entrants:

- Are familiar with and understand the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Properly use equipment as required by paragraph §1926.1204(d) of this Standard;
- Communicate with the attendant as necessary to enable the attendant to assess entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required by paragraph §1926.1209(f) of this Standard;

Alert the attendant whenever:

- There is any warning sign or symptom of exposure to a dangerous situation; or
- The entrant detects a prohibited condition; and

Exit from the permit space as quickly as possible whenever:

- An order to evacuate is given by the attendant or the entry supervisor;
- There is any warning sign or symptom of exposure to a dangerous situation;
- The entrant detects a prohibited condition; or
- An evacuation alarm is activated.
- §1926.1209 Duties of attendants.

The entry employer must ensure that each attendant:

- Is familiar with and understands the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Is aware of possible behavioral effects of hazard exposure in authorized entrants;
- Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under paragraph 1926.1206(d) of this Standard accurately identifies who is in the permit space;
- Remains outside the permit space during entry operations until relieved by another attendant; Note to paragraph §1926.1209(d). Once an attendant has been relieved by another attendant, the relieved attendant may enter a permit space to attempt a rescue when the employer's permit space program allows attendant entry for rescue and the attendant has been trained and equipped for rescue operations as required by paragraph §1926.1211(a).
- Communicates with authorized entrants as necessary to assess entrant status and to alert entrants of the need to evacuate the space under paragraph §1926.1208(e);

Assesses activities and conditions inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:

- If there is a prohibited condition;
- If the behavioral effects of hazard exposure are apparent in an authorized entrant;
- If there is a situation outside the space that could endanger the authorized entrants; or
- If the attendant cannot effectively and safely perform all the duties required under
- §1926.1209 of this Standard;
- Summons rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;
- Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
    - Warns the unauthorized persons that they must stay away from the permit space;
    - Advises the unauthorized persons that they must exit immediately if they have entered the permit space; and
    - Informs the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;
    - Performs non-entry rescues as specified by the employer's rescue procedure; and
    - Performs no duties that might interfere with the attendant's primary duty to assess and protect the authorized entrants.

DUTIES OF ENTRY SUPERVISORS

The entry employer must ensure that each entry supervisor:

- Is familiar with and understands the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;
- Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;
- Terminates the entry and cancels or suspends the permit as required by paragraph 1926.1205(e) of this Standard;
- Verifies that rescue services are available and that the means for summoning them are operable, and that the employer will be notified as soon as the services become unavailable;
- Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and
- Determines, whenever responsibility for a permit space entry operation is transferred, and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

RESCUE AND EMERGENCY SERVICES

An employer who designates rescue and emergency services, pursuant to paragraph §1926.1204(i) of this Standard, must:

- Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified; Note to paragraph §1926.1211(a)(1). What will be considered timely will vary according to the specific hazards involved in each entry. For example,§1926.103—Respiratory Protection requires that employers provide a standby person or persons capable of immediate action to rescue employee(s) wearing respiratory protection while in work areas defined as IDLH atmospheres.

- Evaluate a prospective rescue service's ability, in terms of proficiency with rescue-related tasks and equipment, to function appropriately while rescuing entrants from the particular permit space or types of permit spaces identified;

Select a rescue team or service from those evaluated that:

- Has the capability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) identified;
- Is equipped for, and proficient in, performing the needed rescue services;
- Agrees to notify the employer immediately in the event that the rescue service becomes unavailable;
- Inform each rescue team or service of the hazards they may confront when called on to perform rescue at the site; and
- Provide the rescue team or service selected with access to all permit spaces from which rescue may be necessary so that the rescue team or service can develop appropriate rescue plans and practice rescue operations.

An employer whose employees have been designated to provide permit space rescue and/or emergency services must take the following measures and provide all equipment and training at no cost to those employees:

- Provide each affected employee with the personal protective equipment (PPE) needed to conduct permit space rescues safely and train each affected employee so the employee is proficient in the use of that PPE;
- Train each affected employee to perform assigned rescue duties. The employer must ensure that such employees successfully complete the training required and establish proficiency as authorized entrants, as provided by §§1926.1207 and 1926.1208 of this Standard;
- Train each affected employee in basic first aid and cardiopulmonary resuscitation (CPR). The employer must ensure that at least one member of the rescue team or service holding a current certification in basic first aid and CPR is available; and
- Ensure that affected employees practice making permit space rescues before attempting an actual rescue, and at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative permit spaces, except practice rescue is not required where the affected employees properly performed a rescue operation during the last 12 months in the same permit space the authorized entrant will enter, or in a similar permit space.

Representative permit spaces must, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.

Non-entry rescue is required unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. The employer must designate an entry rescue service whenever non-entry rescue is not selected. Whenever non-entry rescue is selected, the entry employer must ensure that retrieval systems or methods are used whenever an authorized entrant enters a permit space, and must confirm, prior to entry, that emergency assistance would be available in the event that non-entry rescue fails. Retrieval systems must meet the following requirements:

- Each authorized entrant must use a chest or full body harness, with a retrieval line attached at the center of the entrant's back near shoulder level, above the entrant's head, or at another point which the employer can establish presents a profile small enough for the successful removal of the entrant. Wristlets or anklets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets or anklets is the safest and most effective alternative.
- The other end of the retrieval line must be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device must be available to retrieve personnel from vertical type permit spaces more than 5 feet (1.52 meters) deep.
- Equipment that is unsuitable for retrieval must not be used, including, but not limited to, retrieval lines that have a reasonable probability of becoming entangled with the retrieval lines used by other authorized entrants, or retrieval lines that will not work due to the internal configuration of the permit space.
- If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information must be made available to the medical facility treating the exposed entrant.

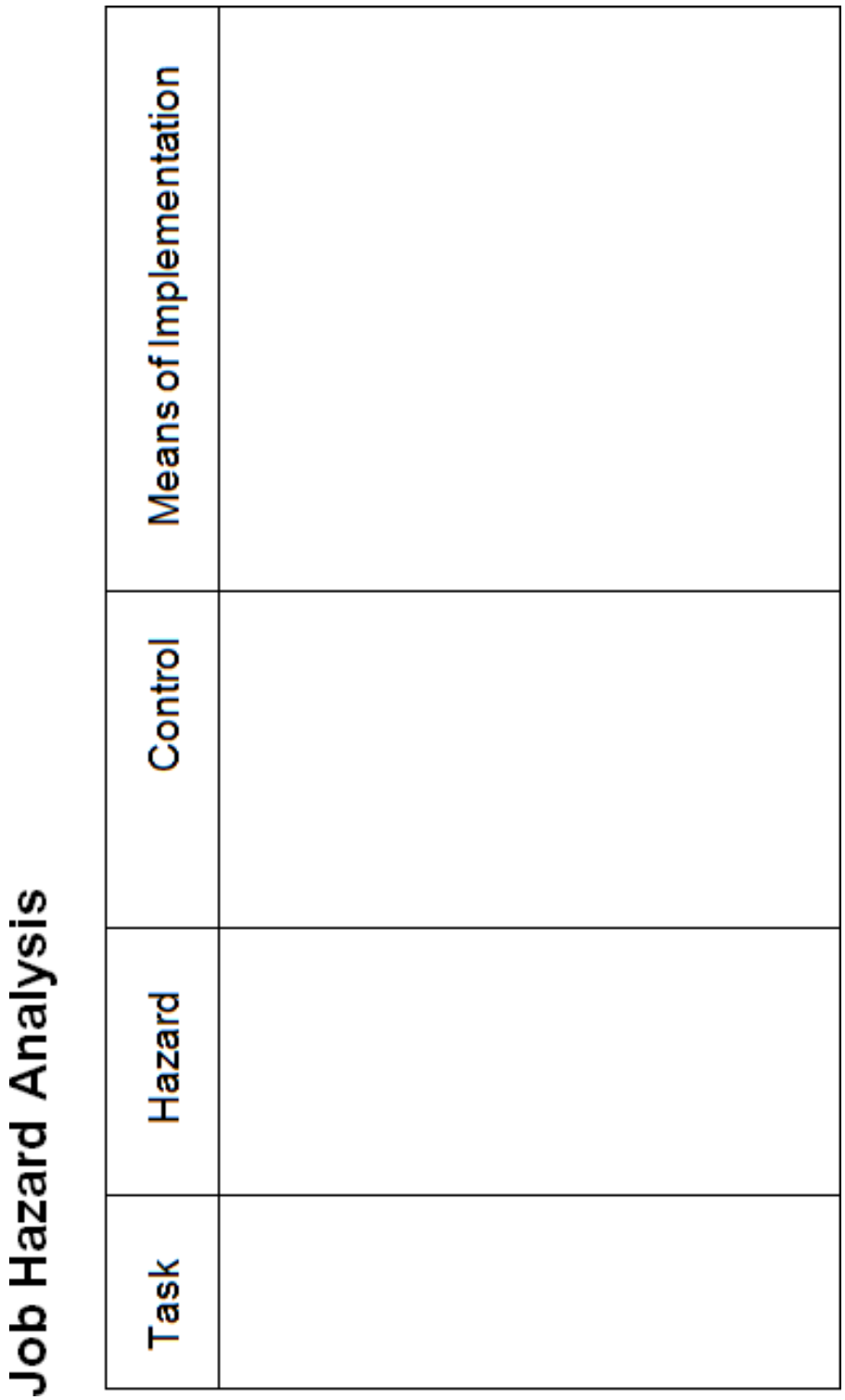
EMPLOYEE PARTICIPATION.

Employers must consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by §1926.1203 of this Standard.

Employers must make available to each affected employee and his/her authorized representatives all information required to be developed by this Standard.

PROVISION OF DOCUMENTS TO SECRETARY.

For each document required to be retained in this Standard, the retaining employer must make the document available on request to the Secretary of Labor or the Secretary's designee.


Job Hazard Analysis
Task
Hazard
Control
Means of Implementation

Communication and Coordination Checklist		Yes	No
1.	Has the host provided controlling contractor the location of the PRCS?		
2.	Has the host provided controlling contractor with the specific nature of the hazard(s) within the PRCS?		
3.	Has the host employer provided controlling contractor with precautions and controls previously utilized in the PRCS by other controlling and entry contractors?		
4.	Has the host communicated and coordinated with controlling contractor on emergency action plan and provided facility orientation protocol?		
5.	Has controlling contractor received, reviewed and consulted with host on above items 1 through 4?		
6.	Has controlling contractor provided and reviewed the information from the host in items 1 through 4 with entry employer?		
7.	Does the entry employer fully understand the information provided by the controlling contractor?		
8.	Have all workers on site been trained to recognize and avoid permit confined spaces?		
9.	Has a plan of communication during entry been established?		
10.	Are there any barriers of communications between workers i.e. language, impairment etc.?		
11	Have all workers been trained in recognition and avoidance of PRCS?		
12.	Has a qualified rescue team been provided a briefing of facility, hazards and procedures?		
13.	Has a bilateral debriefing between the controlling contractor and the entry employer taken place regarding the performance of the PRCS program followed and any hazards confronted or created in the permit space(s) during entry operations?		
14.	Has the controlling contractor apprised the host employer of the information exchanged with the entry entities pursuant to this subparagraph		
15.	Has the host reviewed and archived debriefing notes and information within permit?		

SUPERVISOR AUTHORIZATION - ALL CONDITIONS SATISFIED:

Department or phone number: _____

EMERGENCY CONTACT PHONE NUMBERS:

Ambulance: _____

Fire: _____

Safety: _____

Gas coordinator: _____

CONFINED SPACE ENTRY PERMIT

Confined Space Location/Description/ID Number **Date:**

_____

Purpose of Entry

_____

_____

Time In: _____ **Permit Canceled Time: _____**

Time Out: _____ **Reason Permit Canceled: _____**

Supervisor: _____

Rescue and Emergency Services-

Hazards of Confined Space	Yes	No	Special Requirements	Yes	No
Oxygen deficiency			Hot Work Permit Required		
Combustible gas/vapor			Lockout/Tagout		
Combustible dust			Lines broken, capped, or blanked		
Carbon Monoxide			Purge-flush and vent		
Hydrogen Sulfide			Secure Area-Post and Flag		
Toxic gas/vapor			Ventilation		
Toxic fumes			Other- List:		
Skin- chemical hazards			**Special Equipment**		
Electrical hazard			Breathing apparatus- respirator		
Mechanical hazard			Escape harness required		
Engulfment hazard			Tripod emergency escape unit		
Entrapment hazard			Lifelines		
Thermal hazard			Lighting (explosive proof/low voltage)		
Slip or fall hazard			PPE- goggles, gloves, clothing, etc.		
			Fire Extinguisher		

Communication Procedures:

_____

DO NOT ENTER IF PERMISSABLE ENTRY LEVELS ARE EXCEEDED		**Test Start and Stop Time:** **Start**	**Stop**
	Permissable Entry Level		
% of Oxygen	19.5 % to 23.5 %		
% of LEL	Less than 10%		
Carbon Monoxide	35 PPM (8 hr.)		
Hydrogen Sulfide	10 PPM (8 hr.)		
Other			

Name(s) or Person(s) testing: _____

Test Instrument(s) used- Include Name, Model, Serial Number and Date Last Calibrated:

CFM-Ventilation	Size-Cubic Feet	Pre Entry Time	❑ Central Notified Before Entrance	Time Notified:
			❑ Central Notified After Entrance	Time Notified:

Authorized Entrants	Authorized Attendants
_____	_____
_____	_____
_____	_____

PERMIT AUTHORIZATION **I Certify that all actions and conditions necessary for safe entry have been performed.**	
Name-Print:	
Signature:	
Date:	Time:

Entry Procedure Checklist: Complete the following steps before, during, and after a confined space entry:

Step 1
Obtain a Permit-Confined Space Entry Form from Program Coordinator.
Step 2
Notify Supervisor before the **Confined Space Entry**
Step 3
Verify Confined Space Meter has been calibrated and is in working order
Step 4
Complete the top portion of the Permit-Confined Space Entry Form
Step 5
Ensure all rescue equipment (e.g. tripod, body-belt, lanyard) is in place prior to entry
Step 6
Monitor the confined space with the MSA 4-Gas Detector prior to entry. The entrant and attendant should sign the permit authorization section on the bottom of the permit to ensure all actions and conditions necessary for safe entry have been performed.
Step 7
Employee entering the confined space should wear the 4-Gas Detector after the pre-atmosphere test. The employee should also have a full body harness and lanyard attached to the rescue tripod. Employee shall have a radio and any other necessary personal protective equipment.
Step 8
Employee can enter the confined once Step 7 is completed. The entrant and attendant should complete the Hazards of Confined Spaces and Special Requirements Section of the Permit-Confined Space Entry Form once the employee is within the confined space. The entrant should also gather the % Oxygen, % Explosive Gases, Carbon Monoxide, and Hydrogen Sulfide readings and communicate them to the attendant to place on the Permit Form.
Step 9
The attendant should maintain constant communication with the entrant until the entrant has exited the confined space.
Step 10
The attendant should contact Supervisor once the entrant has exited the confined space.
Step 11
The Permit-Confined Space Entry Form should be given to program coordinator, to file in the Confined Space Records.

HOT WORK

FIRE SAFETY SUPERVISORS

Fire safety supervisors may be the field manager or other safety designee. Their responsibilities in the area of hot work are to ensure that fire safety precautions have been met before authorizing hot work, including the designation of a fire watch. This includes work being performed by outside contractors. The fire safety supervisor(s) will also be responsible for reviewing the proper completion of the Hot Work Permit and conducting periodic inspections to ensure compliance.

AUTHORIZED EMPLOYEES

An authorized employee is defined as the individual that actually conducts the hot work procedure. The authorized employee will be responsible for understanding all facets of this program as explained by management. If the authorized employee does not understand any element of this program, work must be delayed until all elements are fully understood. The authorized employee must conduct the work in the authorized time frame listed on the Hot Work Permit. All required precautions must be double-checked prior to, and during, the actual hot work.

FIRE WATCH

The fire watch is responsible for working alongside of the employee who performs the hot work. The fire watch maintains a constant vigil during the hot work for stray sparks, ignition or other fire hazards. The fire watch must be trained in the use of a fire extinguisher and how to activate the alarm in the event of a fire. The watch should remain in the area for a period of one hour (following work completion) to watch for smoldering fires.

Fire watchers are required whenever welding or cutting is performed in the following situations:

- Appreciable combustible material is closer than 35 feet (10.7 m) to the point of operation,
- Appreciable combustibles are more than 35 feet (10.7 m) away but are easily ignited by sparks,
- Wall or floor openings within a 35-foot (10.7 m) radius expose combustible material in adjacent areas including concealed spaces in walls or floors, or
- Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings or roofs and are likely to be ignited by conduction or radiation.
- Fire watchers shall have fire extinguishers readily available.

TRADE CONTRACTORS

Trade contractors must have a full understanding of the Hot Work Policy and comply with all facets of the program.

PROCEDURE

First, the fire safety supervisor considers if the hot work can be avoided. Once it is determined that hot work is necessary, the fire safety supervisor should confirm all permit checklist precautions have been taken. The following elements are identified on the permit:

- The location and nature of the hot work,
- Identification of the person or contractor who is performing the work,
- Insert an expiration date and time (not beyond one work shift), and
- Emergency notification section completed.

After the permit is completed accurately, the fire safety supervisor signs and issues the permit.

The employee or contractor hangs the permit in a visible place in the work area.
While the hot work proceeds, the fire watch maintains a constant vigil for stray sparks, ignition or other fire hazards and is ready to provide initial fire response.

Once the work is complete, the fire watch conducts a careful inspection of the work area, and adjacent areas, for smoldering fires. The inspection includes floors, above and below the work area, and adjacent rooms. The fire watch then signs the permit and leaves it posted.

The operator should report any equipment defect or safety hazard to his/her supervisor and the use of the equipment shall be discontinued until its safety has been assured. Repairs shall be made only by qualified personnel. The hot work area should be monitored for an additional three hours. This does not need to involve the fire watch.

When the monitoring period has ended, the fire safety supervisor, or a designee, conducts a final inspection of the area and signs the permit. The permit is removed and retained in the maintenance office according to the Taylor Davis Landscape & Construction record retention policy.

FIRE SAFETY PRECAUTIONS

Since a fire safety supervisor authorizes hot work only when specific fire safety precautions are taken, these precautions should be built into the permit system.

35-Foor Rule - the area surrounding the work should be cleared entirely of fire hazards. Floors should be swept clean. Grease and oils should be cleaned up and removed, not simply soaked up with oil dry.

Floors of combustible material (e.g. plank on steel, wood block) must be covered with fire-resistant or noncombustible material.

Flammable liquids like paints, oils and lacquers must be removed from the area, not just sealed.

Combustibles that cannot be moved must be protected with fire-resistant material or metal shields. This includes storage and machinery with grease or lint deposits.

Explosive atmospheres must be eliminated or hot work will not be permit- ted. Processes that produce explosive atmospheres are halted and the area is monitored for accumulation of combustible gases continuously before, during and after hot work.

All wall and floor openings must be covered. Floor openings should be plugged with noncombustible caulk. Ductwork and duct openings shall be sealed with metal covers built for the vent or covered with fire-resistant material.

All doors and fire doors shall be closed to prevent sparks from escaping.

Automatic sprinkler protection must be in service and fully operational.

Hot work equipment must be in good repair. Damaged or leaking hoses or hose attachments are of particular concern on torch cutting and welding equipment.

TRAINING

Cutters, welders and their supervisors must be suitably trained in the safe operation of Hot Work equipment and safe use of the process. Assigned fire watchers must be trained in the use of fire extinguishing equipment and familiar with the facilities for sounding an alarm in the event of a fire.

LIFTING AND DIGGING EQUIPMENT

The operator shall perform all inspections on his/her crane or excavator.

The use of a crane or excavator shall be limited to:

- An employee who has been trained and is qualified to operate the type of crane or excavator to which he/she is assigned,
- A learner who is under the direct supervision of a designated operator, or
- Authorized maintenance personnel while performing their duties.

Operators shall maintain a crane or excavator and its accessories in a condition that does not endanger himself or others.

Modifications or changes to the crane or excavator shall be certified by a qualified, registered engineer. The capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly to reflect any modifications or changes.

An operator shall report any recognized defects of a crane or excavator to the warehouse manager.

Unauthorized employees shall not enter a crane or excavator.

Unauthorized employees shall remain clear of excavators during work operations.

An equipment operator shall not engage in any practice that will divert the operator's attention while operating equipment.

Each equipment operator shall be responsible for operations that are under his/her direct control. When there is any doubt as to safety, an operator shall stop operations and consult with the supervisor before continuing work.

An equipment operator shall not leave equipment unattended unless the operator is notified by the supervisor that it is safe to do so. Before exiting the equipment, the operator shall do all of the following:

- Land any attached load,
- Disengage clutches,
- Put the controls in the off or neutral position,
- Open the main switch or stop the engine, and
- Engage manual locking devices in the absence of automatic holding equipment.

All controls shall be tested by an operator before beginning a new shift. Any controls that do not operate properly shall be adjusted or repaired before operations are begun.

An operator shall respond to signals only from the employee who is directing the operation, unless an emergency stop signal is given.

Any employee who does not know proper crane hand-signals shall not be permitted to work with an operator of a crane.

Inspections of equipment are divided into two categories. Frequent inspections are conducted on a daily to monthly basis. Periodic inspections are conducted at 1 to 12 month intervals.

WIRE ROPE INSPECTION

A running wire rope that is in continuous service shall be visually inspected once each working day. A visual inspection shall consist of observing all rope expected to be in use during that day's operations. The purpose of the visual observations is to discover any of the following damage that may be an immediate hazard. Damage is considered to be any of the following:

- Kinking,
- Crushing,
- Unstranding,
- Birdcaging,
- Main strand displacement
- Core protrusion,
- General corrosion,
- Broken or cut stands, or
- Number, distribution and type of visible broken wires

When damage is discovered, the rope shall be removed from service.
A wire rope that is used on a crane shall be repaired or replaced if any of the following conditions exist:

- One third or more of the original diameter of the outside individual wires is worn,
- There is heat or corrosive damage, or
- Six randomly distributed broken wires in one lay or three broken wires on one strand in one lay. In rotation re- sistant ropes, two randomly distributed broken wires in six rope diameters or four randomly distributed broken wires in 30 rope diameters.
- Wire rope shall be stored in a manner to prevent damage or deterioration.

LOAD CHARTS

A durable and legible load chart shall be available at the operation station for all load bearing equipment.

WORK PLATFORMS

A work platform that is suspended from a crane may be used to hoist or suspend personnel or to provide access in unique situations.

The work platform must be equipped with a top-rail at 42 inches, a mid-rail at 21 inches and a toe-kick.

The guardrail must be able to withstand a force of 5,000 pounds in any outward or downward direction.

Load-lines for work platforms shall be capable of supporting, without failure, seven times the maximum intended load. Load-lines that are rotation resistant shall be capable of supporting, without failure, 10 times the maximum intended load.

The work platform shall only be used for positioning employees and not as an elevator. Before a work platform is used after fabrication, it shall be load-tested to two times the maximum intended load.

A work platform shall also be tested as follows:

- Annually, if used on a regular basis,
- Before use, if the interval of time between use is more than one year,
- After the crane or work platform has been moved to another location on the project site, or
- A trial lift of an unoccupied platform shall be made before employees enter the platform. The trial lift shall be completed anytime the crane and lift move to a different location.

Documentation of the above shall be maintained on the site where the lift is located. There shall be two radios available in the platform if the platform is not in plain view of the crane operator.

Each employee in an elevated work platform shall be protected from falling by wearing a harness and lanyard.

The operator shall remain at the controls of the crane when employees are elevated in a work platform.

An employee in a work platform shall keep all materials, tools and body parts inside the platform while being raised or lowered.

The maximum rate of travel of a work platform shall be 100 feet per minute.

A load or platform shall not be lowered below the point where less than three full wraps of wire rope remain on the drum.

A crane or excavator shall not be permitted to work within 10 feet of energized power lines up to 50 KV. For every additional KV, an additional 12 inches of clearance is required.

Tag lines must be used when necessary to control the platform.

SWING RADIUS

Accessible areas within the swing radius at the rear of the rotating crane or excavator shall be barricaded in a manner that prevents an employee from being struck or crushed by the crane or excavator.

If the swing radius of a crane or excavator creates a pinch-point for employees, the hazardous area shall be barricaded.

CRANES/EXCAVATORS GENERAL OPERATION

An operator shall not leave a crane or excavator unattended with suspended loads. A bucket or blade shall not be left elevated when a machine is unattended.
Windows of any crane or excavator shall be equipped with safety glass. Visual distortions which are caused by broken or defective glass, and which could affect the safe operation of the equipment, shall be replaced.

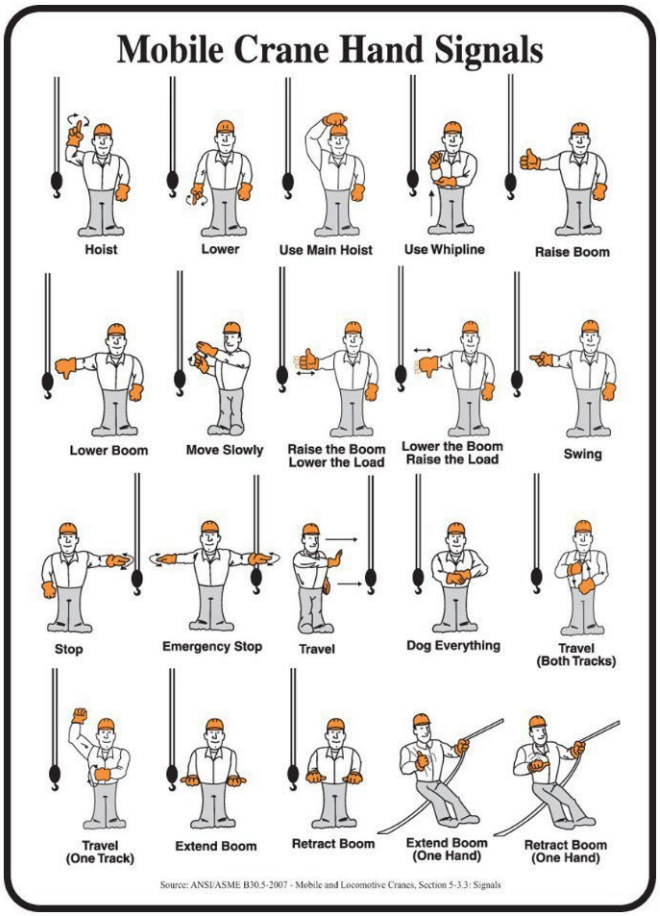
OPERATOR CONDUCT

An operator shall not engage in any practice that will divert his/her attention while engaged in operating a material or personnel hoist.

Each operator shall be responsible for those operations under the operator's direct control.

When there is any doubt as to safety, the operator shall stop operations and consult with the supervisor before continuing work.

An operator shall not leave the equipment unattended unless it has been secured and rendered inoperable.
Hand signals:



MOBILE EQUIPMENT

Only trained, authorized, licensed employees are permitted to operate material handling equipment, i.e. vehicles requiring CDL's, forklifts, skytrak, etc. Training consists of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video and written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee) and evaluation of the operator's performance in the workplace.

Training shall occur prior to employee operation of any forklift.

All operators must complete preliminary forklift operator training online using the Taylor Davis Landscape & Construction learning management system (LMS).

Hands on forklift training must be completed onsite with a qualified person prior to operation.

Operators must receive hands on training for each piece of equipment they will be operating.

An Taylor Davis Landscape & Construction permit must be issued and filled out by a qualified person following the completion of hands-on training.

Lift training certifications must be renewed every three years and a new permit must be issued.

Renewal training may be completed online.

Before operating any piece of equipment, perform general maintenance checks and test all controls to be sure they are functioning properly.

Check all safety equipment, brakes, horns, lights, back-up alarms, etc. before operating machinery.

Seat belts must be worn as required.

Never exceed the manufacturer's load limits.

Whenever equipment is parked, the parking brake must be set. If parked on an incline, the wheels must also be chocked.

Secure loose tools and materials within the operator's cab.

Do not use a vehicle to transport passengers unless it has been designed with proper, secured seating to do so.

Scissors points on all front-end loaders and moving parts on all equipment that could be hazardous to the opera- tor shall be guarded.

All equipment used in site clearing operations must be equipped with roll over protection.

Standard hand signals shall be used and posted on the side of the crane cab.

Vehicles with an obstructed view to the rear must be equipped with an audible warning device.

Operators must be aware of all employees in the area and of clearance points for the equipment.

No modifications can be made to any piece of equipment without the authorization of the manufacturer.

FLOOR DEPRESSIONS

If mobile equipment is onsite, all floor depressions with an unprotected side must have a means to protect equipment from entering this space and causing a potential tipping hazard.

Loading docks are to be secured with a chain across the open bay and shall have an equipment stop secured in place no less than 3.5" in height above working surfaces.

Guardrails, including a toe kick of at least 3.5" in height above working surfaces, are to be used to protect all open sides of a floor depression greater than 19" or if a vertical means of access is being used, such as stairs or ladders.

Column diamonds or home plates, with a depth of 2" or more, awaiting to be filled, must be guarded with a toe kick not less than 3.5" in height above working surfaces.

Guardrails must be installed on a retaining wall with a height of 30" or greater above the dock floor.

All raised floors in excess of 20" must provide protection, such as a guardrail system, to protect mobile equipment from driving off the edge.

There may be other instances where guardrail systems, toe kicks or other methods need to be used and we shall err on the side of caution and install one of the recommended systems.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 13: Mobile Equipment

AERIAL WORK PLATFORM

An aerial work platform is any device supported by scissors, masts or booms designed to raise personnel to an elevated work position.

Elevated work platforms must not be field modified.

Check and test directional controls before using.

Emergency ground level controls must be identified and able to override the platform controls.

Keep guards in place over all moving parts that can be contacted.

PERMITS AND TRAINING

All operators must complete preliminary aerial lift training online using the Taylor Davis Landscape & Construction learning management system (LMS).

Hands on aerial lift training must be completed onsite with a qualified person prior to operation.

Operators must receive hands on training for each piece of equipment they will be operating.

An Taylor Davis Landscape & Construction permit must be issued and filled out by a qualified person following the completion of hands-on training.

Lift training certifications must be renewed every three years and new permit must be issued. Renewal training may be completed online.

DO NOT ATTEMPT TO OPERATE an aerial lift unless you have been properly trained and authorized to do so.

The operator must have a valid operator's permit in their possession while operating equipment.

PRE-OPERATION PROCEDURES

Before each work shift, test all controls and visually inspect the aerial work platform for any type of defects.

Before using the aerial lift, inspect the work area and path of travel for potential hazards.

Before using an aerial lift work platform, correct all unsafe items and conditions.

BASIC OPERATING PROCEDURES

Electrical power lines must be de-energized, or a minimum distance of 10 feet must be kept from power lines in the 0 to 50 kv range. A supervisor should be contacted for further instruction.

Only the employees, tools, materials and equipment necessary to do the job should be on the work platform.

The rated load capacity of the work platform must not be exceeded.

Guardrails must not be used to climb on or support materials or equipment.

Ladders, planks or other means must not be used on the work platform to gain additional height.

A safety belt/harness must be worn when using a vehicle mounted, or boom supported, elevated work platform.

Tie off to the attachment points inside of the work platform, not to any outside object.
Do not exit an elevated work platform.

Do not move an aerial work platform horizontally, unless the platform controls were designed to do so.

When moving an elevated aerial work platform, look in the direction of travel and be sure the work surface is firm, level and free from surface and overhead hazards.
Elevate aerial work platforms only on a firm, level surface.

Use outriggers or stabilizers on a solid surface or pads.

Do not remove or alter any safety devices or interlocks.

Before lowering the work platform be sure the area is clear of personnel and equipment.

Travel Speed Shall Be Limited According to the Following:

- Condition of the surface
- Congestion
- Slope
- Location of personnel
- Other hazards

TAKE CARE OF THE EQUIPMENT

Read the program regarding daily pre-use inspection and other maintenance functions. Establish a plan to ensure that the unit is properly maintained.

If the platform or elevating assembly becomes caught, snagged or otherwise prevented from normal motion and control reversal does not free the platform, all personnel shall be removed from the platform before attempts are made to free it.

SAFETY RULES

Read the Aerial Lift Program. It's full of common sense tips on safe operation, as well as how to keep mobile platforms in good operating condition.

The aerial lift is a man lift, not a crane! Never use the valuable equipment for lifting product or parts. Do not over- load the platform beyond its rated capacity.

The aerial lift must be properly maintained to provide safe and satisfactory service.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 32: Aerial Work Platforms

HAND AND POWER TOOL SAFETY

Visually inspect all tools before each use. Defective tools must be removed from service and tagged or repaired.

Keep all guards in place and operative when using a tool.

Guards removed for repair, service or set-up must be replaced before the tool is returned to use.

Safety devices and operating controls must be operative at all times.

Remove all tools from scaffolds and ladders before moving them, or after completion of the job or workday.

PORTABLE POWERED TOOLS

Do not alter operating controls or constant pressure switches.

Be sure the lock on the controls can be released by a single motion of the finger without releasing your grip on the tool.

Lock on controls on a drill greater than 3/8 inch capacity must not be used when the drill is held by hand.

ELECTRIC POWERED TOOLS

All tools must be grounded or double insulated. GFCI.s must be used with all extension cords, temporary wiring and in wet conditions.

Do not leave a power tool running unattended.

Locate extension cords to minimize tripping hazards.

Do not use the power cord to lift or lower the tool.

Disconnect the power tool before servicing or adjusting.

PORTABLE PNEUMATIC POWERED TOOLS

Use safety clips or retainers in conjunction with impact tools.

Keep pressure off lines while connecting or disconnecting tools.

Use safety fasteners at connections between tools, hose lines and quick disconnects.

Do not exceed the rated pressure capacity of the component parts or the tool.

Use extreme caution when using a hose around electrical lines.

Abrasive blast cleaning nozzles must have valves that can only be held open manually. Nozzle must be supported when not in use.

COMPRESSED AIR

Do not use compressed air for blowing dirt or dust off yourself.

Air pressure for cleaning must not exceed 30 psig.

When blowing chips or dust, wear the proper PPE and protect others in the area.

POWERED STAPLERS AND NAILERS

Do not point or discharge a tool at anything other than the work piece.

Eye protection must be worn by the operator and those within striking distance of the fasteners.

Disconnect the power source when clearing a jam-up.

HAND TOOLS

Do not use a socket, wrench, pliers, etc. that are worn and allow slippage.

Keep impact tools, drift pins, chisels, hammers, etc. free of mushroomed heads.

Do not use hand tools with split, cracked or splintered handles.

Tape measures, or other metal tools, must not be used when working on or near electrically energized parts.

POWDER-ACTUATED TOOLS

Only employees who have received training from the manufacturer and possess a certification shall be allowed to operate powder-actuated tools (Hilti, Ramset).

Powder-actuated tool operators and assistants shall wear safety glasses.

Before using a powder-actuated tool, an operator shall inspect the tool and determine that it is clean, all moving parts operate freely and that the barrel is free from obstructions. A tool found not to be in proper working order, or that develops a defect during use, shall be immediately removed from service, tagged and not used until repaired.

A powder-actuated tool shall not be loaded until just prior to the intended firing time. An unattended powder-actuated tool shall not be left loaded.

A powder-actuated tool shall not be left unattended in a place where it is accessible to unauthorized personnel.

A loaded or unloaded powder-actuated tool shall not be pointed at any person and hands shall be kept clear of the barrel end.

A powder-actuated fastener shall not be driven:

- Through an existing hole unless a positive guide is used to secure accurate alignment,
- Into a material which can be easily penetrated, unless the material is backed by a substance that will prevent the fastener from passing completely through,
- Into a very hard or brittle material, such as cast iron, glazed tile, surface hardened steel, glass block, live rock, face brick or hollow tile, unless designed for such use. (Before fastening any questionable material, the operator shall determine its suitability by using a fastening as a center punch. If the fastener point does not easily penetrate, is not blunted and does not fracture the material, initial test fastenings shall then be made pursuant to the tool manufacturer's recommendations), or
- Directly into material, such as brick or concrete, closer than 3 inches from an unsupported edge or corner, or into a steel surface closer than ½ inch from an unsupported edge or corner, unless a special guard, fixture or jig is used.
- A fastener shall not be driven into a spalled area caused by an unsatisfactory fastening.

A powder-actuated tool shall be used with the correct guard, shield or attachment recommended by the manufacturer.

A powder-actuated tool shall be tested each day before loading to see that safety devices are in proper working order.

The method of testing shall be pursuant to the manufacturer's recommendations.

A powder-actuated tool owner shall have the tool serviced and inspected at regular intervals by competent ser- vice personnel and shall not permit the tool to be altered or repaired, except by competent repair personnel.

In the case of misfire, the operator shall hold the powder-actuated tool in the operating position for not less than 30 seconds. The operator shall then try to operate the tool a second time. If a second misfire occurs, the opera- tor shall wait another 30 seconds, holding the tool in the operating position, then the operator shall proceed to remove the explosive load in strict accordance with the manufacturer's instructions. Misfired cartridges should be placed carefully in a metal container filled with water and returned to the supervisor for disposal.

MACHINERY (GENERAL)

Locate the machine on level, solid footing to eliminate vibration and to secure against movement or upset, unplug power source before servicing or setup, and ensure all machines have point of operation guards in place when being used.

CIRCULAR SAWS

Saws must be equipped with spreaders and anti-kickback devices.

Combs, feather boards and jigs are permitted if guards cannot be used when dadoing, grooving, jointing, molding and rabbeting. Replace guards immediately after these operations.

The circular saw must have a hood type guard covering the blade at all times and automatically adjusts to the material being cut.

Use a push stick when cutting narrow stock.

RADIAL ARM SAW

The blade shall be completely enclosed with a guard that automatically adjusts to the material being cut.

Anti-kickbacks and a spreader will be used when ripping.

The saw will have stops and limit chains to keep the blade from going beyond the cut and the edge of the table.

The cutting head will return gently to the starting point upon release.

Ripping and ploughing will be done against the direction of the saw. The direction of the saw rotation will be marked. A warning sign shall advise against ripping or ploughing from the rear.

FUEL-POWERED TOOLS

Stop tools before refueling or servicing. Move tool at least 10 feet from where it was refueled before starting.

Exhaust toxic fumes when operating tools in an enclosed area.

Do not use a chain saw to open a hole in a floor, wall or panel.

GRINDERS (GENERAL)

An abrasive wheel must have a guard that covers the spindle, nut, flange and periphery.

Abrasive wheels must not be run over their rated RPMs.

Use eye protection when using an abrasive wheel.

Do not use cracked or broken abrasive wheels.

Maintain a work rest within 1/8 inch of the wheel on a bench grinder.

A hand held grinder must have a guard between the wheel and the operator.

HYDRAULIC POWER TOOLS AND JACKS

Use fire-resistant fluids in all hydraulic power tools.

The rated capacity of the jack must be marked and not exceeded.

Use a wood block between the jack and load to prevent slippage.

After raising a load, immediately crib, block or secure.

Lubricate jacks at regular intervals and protect jacks from cold temperatures with antifreeze liquid.

Jacks must be inspected every 6 months, after being sent out to the field and returned and before and after receiving a shock load.

Tag out defective jacks and inspect all repair parts.

CHAIN-FALLS AND COME-A-LONGS

Do not exceed the rated capacity of chain-falls and come-a-longs.

Be sure the object being moved can absorb the power of the pull.

The chain-fall or come-a-long and load must be secured.

Use only extension handles approved by the manufacturer.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 19: Tools

RESPIRATOR PROGRAM

Taylor Davis Landscape & Construction has instituted this respiratory protection program to assure the health of its employees and to comply with OSHA regulations.

PROGRAM ADMINISTRATION

The program will be administered and supervised by the safety director with the help of the safety committee. They will be responsible for the equipment purchases, disbursement and training. Project site supervision will be responsible for distribution and wearing of the respirators as required by site conditions.

CLASSIFICATIONS OF HAZARDS

Job Activity	Hazard	Respirator Type
Sweeping	Particulate	3M 9920 or 3M 8710
Welding	Grinding, Cutting, Welding	3M 9920
Painting, Cleaning, Sealing	Organic Vapors, Solvents	3M 7000/Cartridge 7251 Pre-Filter 7N11
Demolition (Class 1)	Asbestos, Lead, Dust	3M 7000 with Filter 3M 2040
Demolition (General)	Particulate	3M 9920 or 3M 8710
Spray Fire Proofing, Insulation	Particulate	3M 9920 or 3M 8710

APPROVED RESPIRATORS

Respirators have been selected on the basis of hazards to which employees are exposed. The following types of respirators, or their equivalent, are the only respirators authorized for use. Use the one that will best protect from the hazard.

3M Brand 7000 Series is a half face mask cartridge respirator that will be used when exposed to asbestos fibers, hot coal and tar products, spray paint and organic vapors. (NOTE: The proper filter cartridges must be selected based on the hazard.)

3M Brand No. 8710 is a disposable dust/mist respirator that will be used for nuisance dust only.

3M Brand No. 9920 is a disposable dust, fume and mist respirator that will be used for all other general purposes.

STANDARD OPERATING PROCEDURES

If an area cannot be ventilated to keep dust, fume, mist, vapor, etc., below the permissible exposure level, a respirator must be worn as required, observing the following guidelines:

- Request the proper respirator from your supervisor,
- Use your own respirator,
- Never wear anyone else's respirator unless it has been properly sanitized and disinfected,
- Do not chew gum or food while wearing a respirator,
- The respirator must not be removed to talk,
- Facial hair is not permitted if it interferes with the fit/seal of the respirator,

- Change the respirator or cartridges when you sense breathing resistance, smell or taste contaminant, and
- Clean your own personal respirator, as required, and store it in a sealed bag to protect it from contamination.
- We do not work in any conditions that could be immediately dangerous to life or health.

PHYSICALS

Employees requesting (or who are required) to wear respirators on the job, will be sent to the industrial clinic for a physical to ensure there are no medical conditions that would interfere with the wearing of a respirator. A PLHCP will use a medical questionnaire or initial medical examination that obtains the same information as the medical questionnaire.

TRAINING

Employees must be trained before being authorized to wear a respirator. Respirators should be fit tested prior to each use.

SIGNALS, SIGNS, TAGS AND BARRICADES

TRAFFIC CONTROL

When vehicle traffic creates a hazard, use signs, signals and barricades as safeguards. If they do not adequately protect the employees, use a traffic regulator or other traffic controls.

Hand signaling by the traffic regulator on construction operations that are not within a public right-of-way must use an 18 inch hand held paddle.

A hand held paddle sign must be at least 18 x 18 inches, with 2 faces, lettering 6 inches high and mounted on a staff so that the bottom of the sign is not less than 6 feet above the roadway surface. One side of the sign will say "STOP" and the other side will say "SLOW". If the traffic regulator must stop two directions of traffic at the same time, then both faces of the sign will say "STOP". The signs will be as follows:

- "STOP" Face - Red background, white letters and border,
- "SLOW" Face - Orange background and black letters,
- Signs must be octagonal, and
- Reflectorized for night use.
- In darkness, illuminate the traffic regulators with floodlights.
- Traffic regulators will wear reflectorized orange warning garments clearly visible to approaching traffic.

Traffic regulators must wear head, eye and face protection as conditions require.

When vehicle traffic creates a hazard to employees during construction operations, safety vests must be worn and local authorities must be notified to reduce the speed limit.

BARRICADES

When working on an other-than-public, right-of-way construction site, barricades at least 36 inches high must be used to direct vehicular traffic and to re-direct employees from hazardous areas on the worksite. Barricades must be illuminated at night if employees are working in the area.

SIGNS

Accident prevention signs must not have sharp edges, burrs, splinters, etc., that could create a hazard. They must be placed to with enough distance ahead to alert traffic in time and avoid hazard and distraction. Signs must be kept legible and not be obscured. Accident prevention signs include:

- Danger Signs (white on black and red) - An immediate hazard exists. Instruct employees on dangers,
- Caution Signs (yellow on black) - Warn of potential hazards. Instruct employees on precautions,
- Safety instruction Signs (white on green) - Used for general instruction,
- Safety directional Signs (white arrows and black letters), and
- Exit Signs (red letters, minimum 6 x 3/4 inches).

TAGS

Accident prevention tags are to be used as a temporary means of warning employees of defective tools or equip- ment. A tag must be at least 2 3/8 by 4 3/4 inches and attached by a string, wire or adhesive, and removed once the issue is corrected. Accident prevention tags include:

- "DO NOT START" tags - attached to start buttons of machines if starting them would create a hazard,
- "DANGER" tags - warn of immediate hazards,
- "CAUTION" tags - warn of a potential hazard,
- "OUT OF ORDER" tags - used to indicate equipment is out of order and that its use might be hazardous, and
- "DO NOT OPERATE" tags - warn of a potential hazard if equipment is used.

SIGNS FOR SLOW-MOVING VEHICLES

Must be attached centrally to the rear of any vehicle designed to move 25 MPH or less on any public, private or temporary road.

Must be visible for 600 feet in both daylight and at night.

Must be securely mounted, point up, unobscured with the bottom of the sign 3 to 5 feet above the ground.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 22: Signals, Signs, Tags and Barricades

INCLEMENT WEATHER STANDARD

In all cases of inclement or severe weather, the field manager is responsible for monitoring the weather and notifying all parties on the site when any of the following types of inclement weather are a possibility and when any weather watch or warning has been issued.

HEAVY RAIN AND FLASH FLOODS

In case of a flash flood warning:

- All materials must be secured,
- All electrical devices must be disconnected,
- All excavations and trenches must be exited, and
- All employees must seek higher ground.

After flash flood warning has expired, before work may reconvene, all excavations, walking surfaces, raised working surfaces, such as scaffolding and electrical devices, must be inspected for loss of integrity and safety hazards.

LIGHTNING

If lightning is spotted from a project site, all outdoor activities in which elevation, raised tools and/or metal mate- rials are required shall stop immediately, including all exterior work operations such as, but not limited to, cranes, lifts, concrete pumping, concrete raking and finishing, work on scaffolding and ladders and all metal fencing work.

The above mentioned work may reconvene thirty (30) minutes after last lightning strike and thunder.

HIGH WINDS AND TORNADOES

If high winds, wind speed of 25 mph or more, are present and outdoor activities are taking place, all loose materials must be secured to prevent injury and damage.

All elevated work must be stopped when the wind speed is 25 mph or more, including gusts, and may reconvene when wind speed and gusts are below 25 mph.

If wind speed and/or gusts are at or above 35 mph, all work is to stop and all employees must take shelter.

If a tornado watch is in effect, all lose materials must be secured and all elevated work must stop until the watch has expired.

A pre-tornado plan meeting must be held to discuss action to take if a tornado warning occurs. In areas where no shelter is available, work operations must be suspended during a tornado watch.

If a tornado warning is in effect, all work must cease, and all employees must seek safety in the designated tornado shelter until the warning has expired.

HEAT AND COLD STRESS

HEAT STRESS

Workers exposed to hot indoor environments or hot and humid conditions outdoors are at risk of heat-related illness, especially those doing heavy work tasks or using bulky or non-breathable protective clothing and equipment. Some workers might be at greater risk than others if they have not built up a tolerance to hot conditions, or if they have certain health conditions.

Important ways to reduce heat exposure and the risk of heat-related illness include:

- Engineering controls, such as air conditioning and ventilation, that make the work environment cooler,
- Increasing general ventilation by using cooling fans,
- Using work practices such as work and rest cycles,
- Scheduling physically demanding jobs to be done during cooler times of the day,
- Drinking water often,
- Providing workers an opportunity to build their tolerance for working in the heat, allows workers time to acclimate,
- Taking frequent breaks,
- Developing a project specific emergency plan that specifies what to do if a worker has signs of heat related ill- ness, and ensure medical services are available if needed,
- Training workers to watch out for each other and any symptoms of heat-related illness, and administer first aid to anyone who is developing one.

Taylor Davis Landscape & Construction will include these preventative steps in project site training and review as hot weather approaches.

COLD STRESS

As cold weather approaches, Taylor Davis Landscape & Construction will train workers on the hazards of the job and safety measures to use, such as engineering controls and safe work practices, that will protect workers' safety and health. Engineering Controls include:

- Radiant heaters may be used to warm workers in outdoor security stations, and
- If possible, work areas will be shielded from drafts or wind to reduce wind chill.

Safe work practices include:

- Dressing properly is extremely important to preventing cold stress. The type of fabric worn also makes a difference. Cotton loses its insulation value when it becomes wet. Wool, silk and most synthetics, on the other hand, retain their insulation even when wet.
    - The following are recommendations for working in cold environments:
        - Wear at least three layers of loose fitting clothing. Layering provides better insulation. Do not wear tight fitting clothing.
        - An inner layer of wool, silk or synthetic to keep moisture away from the body,
        - A middle layer of wool or synthetic to provide insulation even when wet and

- An outer wind and rain protection layer that allows some ventilation to prevent overheating.
- Wear a hat or hood to help keep your whole body warmer. Hats reduce the amount of body heat that escapes from your head.
- Wear insulated and waterproof boots (or other footwear).
- Monitor your physical condition and that of your coworkers.
- Dress properly for the cold.
- Stay dry in the cold because moisture or dampness, e.g. from sweating, can increase the rate of heat loss from the body.

CRYSTALLINE SILICA

Crystalline silica is a basic compound of soil, sand, granite and many other common materials that may become respirable size particles.

Crystalline silica can be found in such materials as sand, stone, rock, concrete, brick, block and mortar.

Silica can cause silicosis, a respiratory disease which is irreversible, incurable, progressive and can develop over long periods of time. Silica can also cause lung cancer.

As of September 23, 2017, per OSHA Standard 1926.1153, when occupational exposures to respirable crystalline silica in excess of 25 micrograms per cubic meter in an eight hour time weighted average, employees are to be provided with and to follow a written exposure control plan designed and implemented by a competent person. Controls, such as elimination, substitution, engineered controls, administrative controls or proper personal protection equipment, must be taken in accordance with activities and exposure limits per modified Table 1 and employees must implement the engineering control and must wear respiratory protection when engaging in any of the activities listed in Table 1 (on next page).

Taylor Davis Landscape & Construction has provided a written exposure control plan for all activities listed in Table 1 that includes the following (these plans were written and implemented by the Taylor Davis Landscape & Construction safety director):

- Tasks involving exposure to respirable crystalline silica,
- Engineering controls, work practices and respiratory protection for each task,
- Housekeeping measures, and
- Procedure to restrict access.

Caution is to be taken during housekeeping when silica is present. When it can contribute to exposure, employees must not dry sweep or brush or use compressed air for cleaning surfaces or clothing, unless proper ventilation methods are taken. This method can only be used if HEPA vacuums, wet sweeping or sweeping compound cannot be used. Employees must wear respiratory protection when cleaning up dust that contains silica in addition to the engineering controls.

Medical exams must be offered to employees who will be required to wear a respirator under the standard of 30 or more days a year and within 30 days of initial assignment. Taylor Davis Landscape & Construction must offer examinations every three years to workers who continue to be exposed above the trigger. Medical examinations must include work history, physical exam, chest x-ray and pulmonary function test. TB testing is required at initial exam only. In addition to the fore mentioned medical exams, baseline exams must be made available to all employees within 30 days of initial assignment.

Baseline exams are to include medical and work history, physical exam with emphasis on respiratory system, chest x-ray, pulmonary function test and TB test.
Taylor Davis Landscape & Construction is required to provide training to employees on health hazards, exposure tasks, workplace protection, medical surveillance, contents of standard and competent person qualifications.

Task	Engineering Control	Respiratory Protection	Notes
Stationary masonry saws	Use with integrated water delivery system	N95 Respirator	
Handheld power saws	Use with integrated water delivery system	N95 Respirator	
Handheld power saws for cutting fiber-cement board	Use with dust collection system	N95 Respirator	
Walk behind saws	Use with integrated water delivery system or dust collection system	N95 Respirator	
Drivable saws	Use with integrated water delivery system or dust collection system	N95 Respirator	
Rig mounted core saws or drills	Use with integrated water delivery system	N95 Respirator	
Handheld and stand-mounted drills	Use drill with shroud or cowling with dust collection system	N95 Respirator	
Dowel drilling rigs for concrete	Use shroud around drill bit with dust collection system	N95 Respirator	Use HEPA-filters vacuum when cleaning holes
Jackhammers and handheld powered chipping tools	Use with integrated water delivery system or use with shroud and dust collection system	N95 Respirator	
Handheld grinders for mortar removal	Use with shroud dust collection system	N95 Respirator	Work limited to 4 hours per 24 hour period
Handheld grinders for uses other than mortar removal	Use with integrated water delivery system (outdoors only) or use with shroud dust collection system	N95 Respirator	
Walk-behind milling machines and floor grinders	Use with integrated water delivery system or dust collection system	N95 Respirator	
Small drivable milling machines (less than half lane)	Use with integrated water delivery system	N95 Respirator	
Large drivable milling machines (half lane or more)	Use with exhaust ventilation on drum enclosures and water delivery system	N95 Respirator	
Crushing machines	Use with integrated water delivery system or a ventilated, climate-controlled booth	N95 Respirator	
Heavy equipment/utility vehicles used during activities involving silica-containing materials	Operate within enclosed cab or use water/dust suppressant	None	
Heavy equipment/utility vehicles used for grading/excavating non- silica containing materials	Apply water/dust suppressant or operate within closed cab	None	

Taylor Davis Landscape & Construction is required to make and maintain records for any air sampling, any objective data in determining what tasks result in exposure and any medical surveillance for employees

STILTS

This standard defines the minimum OSHA standard. The use of stilts will be addressed on a project-to-project basis. Please see the field manager in charge for further instruction.

Stilts may only be used by trained employees that are performing work in the scope of our interiors division, such as drywall and painting. The field manager must be notified of their use prior to each shift.

Stilts must be used in accordance with the manufacturers' recommendations.

Stilts may be adjusted to heights from 12 inches to 36 inches
.
Stilts shall be inspected for damage, wear and corrosion. Defective stilts, pins and straps shall be repaired or replaced before use.

Stilts shall be used only if the following conditions exist:

- All floors must be leveled, floor holes securely covered and no floor depressions,
- The top edge height of the top rail, or equivalent member, shall be increased an amount equal to the height of the stilts,
- The floor must be capable of supporting a load on the stilt's base plate without deformation of more than 1/4 inch,
- Floors must be cleared of debris, materials or liquids that could cause a tripping hazard, and
- Stilts shall not be used when going from one level to another.

GENERAL WASTE MANAGEMENT

Waste and scrap materials generated for each project should be estimated prior to work being performed so that the need for containers and waste removal, if necessary, can be determined. Types of wastes and scraps are generally the same for each project.

Employees are instructed on the proper handling, storage and disposal of waste for each specific project. This may include general instruction on disposal of non-hazardous wastes, trash or scrap materials. If wastes generated are classified as hazardous, employees will be trained on a project-specific basis to ensure proper disposal.

Waste should be recycled, whenever possible using waste segregation strategies such as site-separation, com- mingled recycling or hybrid recycling.

SECTION THREE

STEEL ERECTION

CONTROLLING CONTRACTOR REQUIREMENTS

Before erection begins, the controlling contractor is obligated to inform the steel erector that the concrete in the footings, piers and walls and the mortar in the masonry piers and walls has attained either 75% of the intended minimum compressive design strength or sufficient strength to support the imposed loads during steel erection, on the basis of an appropriate ASTM standard test method of field-cured samples. The controlling contractor shall inform the steel erector that repairs, replacements and modifications to the anchor bolts have been approved by an engineer.

The following shall be provided for the steel erector:

- Adequate access roads into and through the site for the safe delivery and movement of derricks, cranes and other necessary equipment and material to be erected. Adequate safety measures must also be in place for pedestrian and vehicular movement around the site, and
- A firm, properly graded, drained area easily accessible to the work.
- Adequate space for the safe storage of materials and safe operation of the erector's equipment must also be provided.

HOISTING & RIGGING

All hoisting operations shall be pre-planned to ensure that swing paths are pedestrian free.

All loads shall be rigged by a qualified rigger.

Tag lines should be used when necessary to control the load. If tag lines are used, they must be non-conductive. Gloves are required to be used at all times when working with a tag line.

Safety latches on hooks shall not be deactivated except in either of the following situations:

When a qualified rigger has determined that the hoisting and placing of purlins and single joists can be performed more safely by doing so, or

When equivalent protection is provided in a site-specific erection plan.

Routes for suspended loads shall be preplanned to ensure that no person is required to work directly below a suspended load except for the following:

- Employees are engaged in the initial connection of the steel, or
- Employees are necessary for the hooking or unhooking of the load.

When working under suspended loads, all of the following criteria shall be met:

- Materials being hoisted shall be rigged to prevent unintentional displacement, and
- Hooks with self-closing safety latches (or their equivalent) shall be used to prevent components
- from slipping out of the hook.

LIFTS

A multiple lift shall only be performed if all of the following criteria are met:

- A multiple lift rigging assembly is used.
- A maximum of five members are hoisted per lift, and
- Only beams and similar structural members are lifted.

The total load shall not exceed either of the following:

- The rated capacity of the hoisting equipment specified in the hoisting equipment load charts, or
- The rigging capacity specified in the rigging rating chart.

The multiple lift rigging assembly shall be rigged with members attached at their center of gravity and maintained reasonably level, rigged from the top down and rigged not less than seven feet apart.

The members on the multiple lift rigging assembly shall be set from the bottom up.

Controlled load lowering shall be used whenever the load is over the connectors.

STRUCTURAL STEEL ASSEMLY

Structural stability shall be maintained at all times during the erection process.

PLUMBING UP

Turnbuckles and other apparatus used in plumbing up shall be accessible to the employees for adjustment and dismantling. Connections of the equipment used in plumbing up shall be secured to prevent unwinding while under stress.

When used, plumbing up equipment shall be in place and properly installed before the structure is loaded with material such as loads of joist, bundles of decking or bundles of bridging.

Plumbing up equipment shall be removed only with the approval of a competent person.

METAL DECKING AND DECKING BUNDLES

Bundle packaging and strapping shall not be used for hoisting unless it is specifically designed for that purpose.

If loose items such as dunnage, flashing or other materials are placed on top of the metal decking bundles to be hoisted, such items shall be secured to the bundles.

Metal decking bundles shall be landed on framing members so that enough support is provided to allow the bundles to be unbanned without dislodging them from the supports.

At the end of the shift, or when environmental or site conditions require, metal decking shall be secured against displacement.

ROOF HOLES & OPENINGS

Framed metal deck openings shall have structural members turned down to allow for continuous deck installations, except where not permitted by structural design constraints or constructability.

Roof holes, floor holes and openings must be decked over. If a hole or opening size, configuration or other structural design does not allow openings to be decked over, such as with elevator shafts, stairwells and the like, employees shall be protected from falling by guardrails, safety net systems or personal fall arrest systems.

Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed to fulfill its specific use.

Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.

All covers shall be secured when installed to prevent accidental displacement by wind, equipment or employees.

All covers shall be painted with high-visibility paint, or shall be marked with the word “HOLE” or “COVER”, to pro- vide warning of the hazard.

Smoke domes or skylight fixtures are not considered covers for the purpose of this rule, unless they meet the strength requirements of the fourth bullet point.

Wire mesh, exterior plywood or the equivalent shall be installed around columns where planks or metal decking do not fit tightly. The materials used shall be of sufficient strength to provide fall protection for personnel and pre- vent objects from falling through.

COLUMN ANCHORAGE, ERECTION STABILITY, REPAIR, REPLACEMENT AND ANCHOR-RODS

All columns shall be anchored by a minimum of four anchor bolts.

All columns shall be evaluated by a competent person to determine whether guying or bracing is needed; if guying or bracing is needed, it shall be installed.

Anchor bolts shall not be repaired, replaced or field-modified without the approval of the structural engineer.

Before the erection of a column, the controlling contractor shall provide written notification to the steel erector if there has been any repair, replacement or modification of the anchor bolts of that column.

BEAMS AND COLUMNS, DIAGONAL BRACING, COLUMN SPLICES AND PERIMETER COLUMNS

During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts per connection, of the same size and strength, drawn up wrench tight (or the equivalent) as specified by the structural engineer.

A competent person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.

Perimeter columns shall not be erected unless both of the following provisions are satisfied:

The perimeter columns extend a minimum of 48 inches above the finished floor to permit the installation of perimeter cables before erection of the next tier, except where constructability does not allow, and

The perimeter columns have holes or other devices in, or attached to, such columns to allow for the installation of perimeter cables.

All Structural Steel projects require the completion of a Site Specific Safety Plan.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 26: Steel Erection

WELDING & CUTTING

A minimum of one 2A-10BC portable fire extinguisher shall be immediately available to the work area during all cutting and welding operations.

One employee will be responsible for fire safety where a fire could start or one of the following conditions exist:

- Easily ignited, appreciable, combustible and flammable materials are less than 35 feet from a welding operation,
- Combustible and flammable material is adjacent to the opposite side of a metal partition, wall, ceiling or floor that is likely to ignite by conduction or radiation, or
- If there is the possibility that a smoldering fire may have started, the person shall remain at the scene of the work for not less than 30 minutes after the welding operation has stopped.

Face and eye protection shall be worn by a welder, and any other employees exposed to a risk of injury from spatter, flash or both, during welding operations.

Leather work boots are required to be worn during all welding operations.

Welding gloves shall be provided by the employer, at no expense to the employee, and shall be worn to protect the hands and wrists.

When necessary, such as when performing overhead arc welding, sleeves shall be provided by the employer, at no expense to the employee, and shall be worn to protect the arms.

When an employee is involved in acetylene/propane burning, cutting or welding, tinted safety glasses are not sufficient. "Shade 5" tinted goggles with wrap around protection must be worn.

When an employee is involved in spot or arc welding on steel, a welding hood, which covers the face and has "Shade 9" or "Shade 10" protection is required. Any employee assisting a welder must wear "Shade 5" safety glasses with side shields.

When an employee is involved in spot or arc welding on galvanized steel, a welding hood which covers the face and has "Shade 9" or "Shade 10" protection shall be worn. In addition, a charcoal filter equipped respirator shall be worn.

An employee working in the vicinity of arc welding operations and exposed to the direct rays of the arc shall be shielded by a noncombustible or flameproof screen provided by the employer, at no expense to the employee.

Only apparatus designed for use with fuel gas or oxygen, such as a torch, regulator, pressure-reducing valve, acetylene generator and manifold shall be used for welding or cutting.

An oxygen cylinder, fuel gas cylinder, cylinder valve, coupling regulator, hose and apparatus shall be kept in good operating condition and free from defects.

Oxygen shall only be used for welding or cutting.

Employees involved in welding shall place welding cable, hose and other equipment so that it is clear of passage- ways, ladders and stairways or shall assure that it is protected against damage and does not create a hazard to an employee.

An oxygen cylinder, fuel gas cylinder, cylinder valve, coupling regulator, hose and apparatus shall be kept free from oily hands or gloves. A jet of oxygen shall not be permitted to strike oily surfaces or greasy clothing and shall not be permitted to enter a fuel, oil or other storage tank.

A torch shall be inspected before each shift for leaking shutoff valves, hose and tip connections or clogged tips. A defective torch shall not be used.

A clogged tip opening shall be cleaned with a device, such as a drill or cleaning wire, designed for this purpose.

A torch shall only be lit by a friction lighter (striker). Items such as matches, hot work or cigarette lighters shall not be used.

An electrode shall not be taped against a cylinder to strike an arc.

Acetylene shall not be utilized or piped, except in cylinder manifolds, at a pressure in excess of 15 psig.

An arc welding and cutting cable shall be of the completely insulated, flexible-type and shall be capable of handling the maximum rated current requirements of the work, taking into account the duty cycle under which the welder is working.

A manual electrode holder shall be specifically designed for arc welding and cutting and shall be capable of handling the maximum rated current required by the electrode.

A welding machine shall be disconnected when being moved and shall be turned off when not in use.

A welder shall not let live electrodes or holders touch his bare skin or damp clothing. When arc welding is per- formed in wet conditions, or under a condition of high humidity, the welder shall be protected against electrical shock.

Electrode holders shall not be cooled by immersion in water.

Welding shall not be permitted where fumes of chlorinated hydrocarbons are present or will reach (or be drawn into) the atmosphere surrounding the welding operation.

Before starting an arc welding operation, the welder shall ensure the:

- Work lead is secured to the work,
- Magnetic work clamps are free of spatter on the contact surface,
- Welding cable is spread out, if necessary, to prevent overheating and damage,
- Grounding connections are secured to a good ground, and
- Required switching equipment for shutting down the machine has been provided.

A welder shall not curl or loop welding cable around his/her body.

Spliced welding cable shall not be used within 10 feet of an arc welding machine.

Cut insulation on work and lead cable, or exposed bare conductors, of an arc welding machine shall be protected by electrical tape and shall be made watertight or the conductor shall be replaced. Splices shall be made by insulated welded joints or pressure connectors.

An arc welding machine that has become wet shall be thoroughly dried and tested before use.

Welding operations shall not be performed within 50 feet of explosives, stored cylinders or stored fuel. Combustible and flammable materials located within 35 feet of a welding operation shall either be removed or covered with a fire-resistant material.

Cracks or openings through which sparks could pass through the floor or wall that are within 35 feet of a welding operation shall be covered with a fire-resistant material.

A wood floor within 10 feet of a welding operation shall be protected by either wetting down, covering with sand or covering with a fire-resistant material.

Welding operations shall not be performed on drums, barrels, tanks or other containers until they have been cleaned of all flammable, combustible or toxic materials or fumes. (Please refer to the section on handling and storage of materials for more information.)

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 7: Welding and Cutting

CONCRETE CONSTRUCTION

When an employee is directly involved in the pouring of concrete, screening or troweling, safety glasses with side- shields shall be worn.

REINFORCING STEEL

A route designated as a means of access or egress across reinforcing steel for general traffic shall be provided with a walkway.

An employee shall not be permitted to work above vertically protruding reinforcing steel unless the steel has been protected to eliminate the hazard of impalement.

An employee who is placing and tying reinforcing steel and who works more than six feet above an adjacent working surface shall be provided and required to use an approved safety belt for positioning.

Reinforcing steel or walls, piers, columns and other similar vertical structures shall be guyed, braced or otherwise supported to prevent collapse.

Reinforcing steel shall not be used as a scaffolding hook or stirrup or as a load-bearing member in a lifting device.

Reinforcing steel shall not be welded and used as a load-bearing member.

Roll wire mesh shall be secured at each end to prevent dangerous recoiling action.

Roll wire mesh spear ends shall be trimmed to the nearest point.

CONCRETE MIXING, POURING AND FLOATING

The handle on a bull-float that is being used where an energized electrical conductor or power-line exists, shall be constructed of non-conductive material or be insulated with a non-conductive sheath.

A powered and rotating-type concrete troweling machine that is manually guided shall be equipped with a control switch that will automatically shut off the power when the hands of the operator are removed from the equipment handles.

An employee shall not be permitted to ride a bucket, or walk or work under a bucket that is suspended from a crane or cableway.

A concrete bucket that is positioned by a crane or cableway shall be suspended from an approved swivel safe- ty-type hook.

When the point of placement is not readily visible to the crane operator, either a signalman shall be positioned in clear view of the crane operator or radios shall be used.

An employee who is green cutting, sandblasting or applying concrete through a pneumatic hose shall wear head, face and eye protection.

Formwork, shoring and re-shoring shall be designed, erected, supported, braced and maintained so that they will support all vertical and lateral loads that may be imposed upon them during placement of concrete structure.

Stripped forms and shoring shall be removed and stockpiled promptly after stripping in all areas in which an employee is required to work or pass. Protruding nails, wire ties and other form accessories that are not necessary to subsequent work shall be pulled, cut or modified to eliminate any hazard.

A construction load imposed on a structure, or a part thereof, shall not be more than the design capacity.

PLACING AND REMOVING FORMS

A tag line shall be used to control large panels or sections.

Forms shall not be completely removed until the concrete can support its own weight and any superimposed load.

Built-up sections shall have lifting attachments that are capable of handling an imposed load.

Vertical, horizontal and overhead forms that are being raised or removed by lifting equipment shall be braced or secured before being released from the load line.

CONCRETE CURING

When construction areas are enclosed with canvas, or other flammable materials, open flame salamanders shall not be used as a source of heat.

When salamanders, or similar heating units, are used to protect concrete from freezing:

All salamanders shall be covered and properly vented,

Salamanders shall not be refueled until extinguished and cooled, and

Where tarps or other flammable materials are used to form protective enclosures for winter protection, the material shall be fire resistant and installed to prevent contact with the heating unit.

FOR ADDITIONAL INFORMATION SEE MIOSHA CONSTRUCTION STANDARDS PART 25: Concrete Construction

MASONRY WALL BRACING

RESTRICTED ZONE

The masonry contractor must establish where and when restricted zones will be needed and provide a restricted zone plan to the controlling contractor prior to the start of work.

Only trained workers may enter a restricted zone. The training must be documented.

The restricted zone must be clearly delineated by signage (in accordance with Rule 207).

Signage must be posted on all unsupported walls more than eight feet in height.

MONITORING WIND SPEED AND EVACUATION

Each employer with employees working in a restricted zone must designate a competent person to monitor the wind speed using a wind measuring device.

Employees must evacuate a restricted zone when wind speed limits are exceeded by either of the following parameters:

20 mph wind speed for unsupported walls during the initial period -- which is the period of time limited to one working day, during which the masonry is installed as specified in Rule 209, or

35 mph wind speed for unsupported walls during the intermediate period -- which is the period of time following the initial period until the wall is connected to its final lateral stability supports as specified in Rule 210.

WALL BRACING DESIGN

Wall bracing systems must be designed by a qualified person. They must be capable of providing stability to the wall for a wind speed of 40 MPH.

Walls can be braced using either one of two types of wall bracing systems:

A Triangle Wall Bracing System for walls up to 16 feet, as specified in Rule 212, or

A Bracing Plan designed using accepted engineering practices as prescribed in the Standard Practice for Bracing Masonry Walls Under Construction and Masonry Wallbracing Design Handbook. Designs and specifications for bracing plans must be available at the site.

TRAINING REQUIREMENTS

Competent persons and those involved in installing, altering, repairing, maintaining or inspecting the wall bracing system and restricted zone must receive training by a qualified person as prescribed in Rule 205(2).

Employees who enter a restricted zone of a masonry wall under construction must receive training by a qualified person in the recognition and avoidance of hazards associated with masonry wall bracing, collapse area/restricted zones and conditions requiring evacuation as prescribed in Rule 205(3).

Training records must be available at the project site.

INSPECTIONS

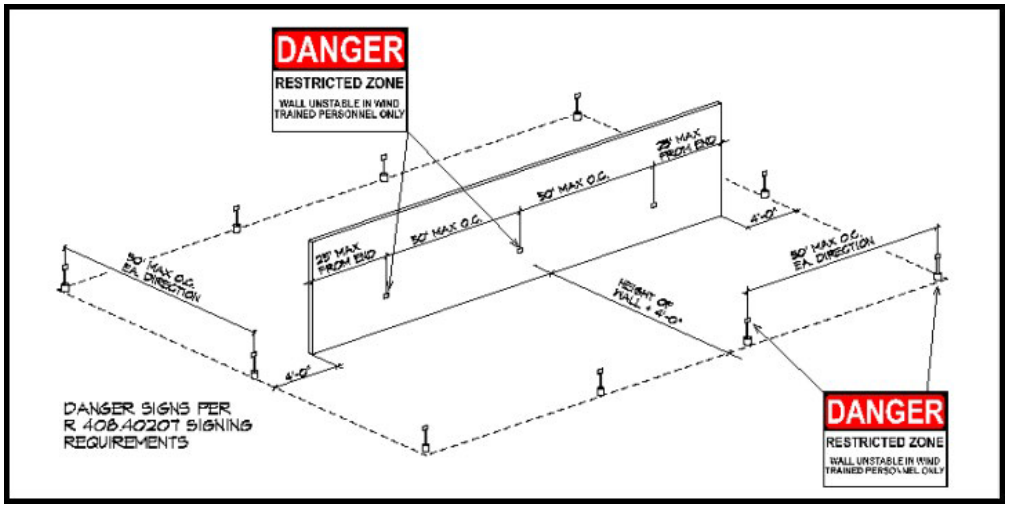
At the beginning of each shift, and after any occurrence that could affect the structural integrity of the wall bracing system or the wall, a competent person must inspect for visual defects all unsupported masonry walls and wall bracing system.

All damaged or weakened bracing elements must be repaired or replaced immediately. It is particularly important to inspect wall bracing after any high wind event.

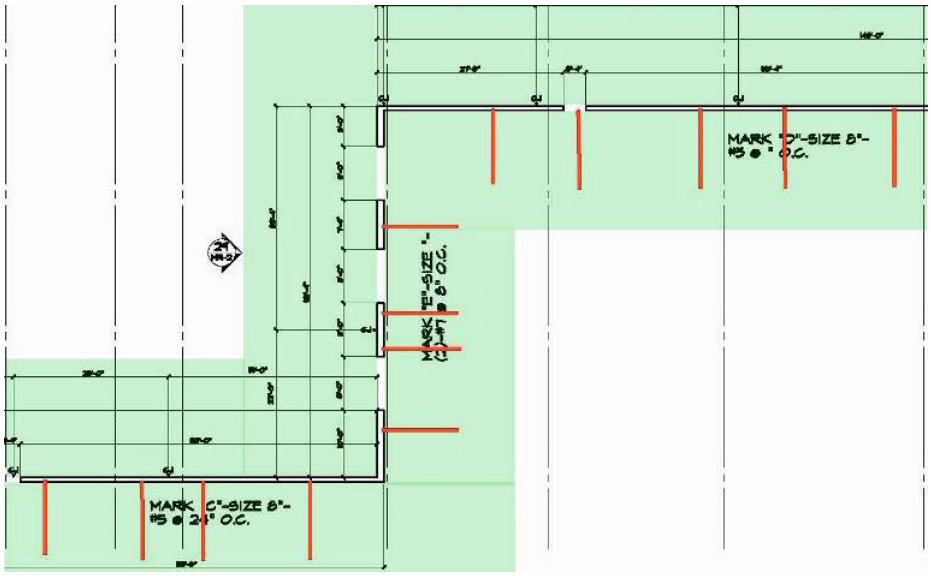
ENGINEERING GUIDELINES

The Mason Contractors Association of America (MCAA) established a council to develop a wall bracing standard. The Council published the Standard Practice for Bracing Masonry Walls Under Construction in 1999 and it was revised in 2001 by MCAA. In 2003, the Masonry Wall Bracing Design Handbook was also published by MCAA. The handbook displays over 700 different wall bracing configurations based on the Standard Practice for Bracing Masonry Walls Under Construction. The handbook serves to assist mason contractors in identifying brace locations for typical applications. All site conditions cannot be taken into account in the handbook. A registered professional engineer should be consulted for situations not addressed in the handbook. If using one of the masonry wall bracing designs in the handbook, the mason contractor must have it available for review at the site along with any additional specifications. The key to preventing injuries and fatalities related to masonry wall bracing is employee training and frequent/thorough inspections to identify hazards.

RESTRICTED ACCESS ZONE



SAMPLE WALL BRACING PLAN



FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 2: Masonry Wall Bracing

EXCAVATING, TRENCHING AND SHORING

It is the policy of Taylor Davis Landscape & Construction that all excavations deeper than five feet shall be performed by qualified trade contractor agencies. If entry is to be made into a trench or excavation greater than four feet deep, specific precautions must be taken in accordance to OSHA CONSTRUCTION STANDARDS PART 9: Excavation, Trenching and Shoring. Excavation activities shall be conducted safely with associated exposures eliminated and/or controlled.

Taylor Davis Landscape & Construction, in accordance with OSHA, requires that a competent person be onsite during trenching/excavation activity or employee entry into a trench or excavation.

A competent person must have the following qualifications:

- Be able to identify and predict trenching/excavation hazards, and
- Have authority to eliminate hazards and stop work, if necessary.

TRAINING

Initial training of employees shall occur during orientation phase three for employees who foreseeably will work in and around excavation work. Hazard recognition and excavation protection systems shall be included in the training.

Site specific training shall occur before the start of excavation work activities including hazards and controls noted in the Site Specific Safety Plan and other provisions of the written plan.

GENERAL PRECAUTIONS

Know the location of all underground facilities before digging.

Hand dig when excavating has uncovered or may uncover facilities.

If a pipe or cable is damaged, evacuate the danger area and notify the utility company immediately.

Check the table in Benching, Sloping, Shoring and Shielding Requirements for soils and proper angle of repose.

Trenching over five feet deep must be properly shored or sloped.

Water, loose materials or obstacles that create a hazard must be removed or supported before beginning work.

Do not store materials within two feet of the excavation's edge.

Vehicles must not be driven or parked where a cave-in might occur.

Excavation 48 inches deep must have access ladders extending 36 inches above the edge and laterally every 25 feet.

Use of portable trench boxes and shields are permitted if they provide the same level of protection as shoring or sloping.

Keep walkways clear and protected along excavation areas and when entering roadways.

Protect structures adjacent to excavation or trenching from damage or shifting.

Test the atmosphere in excavations of more than four feet when there are hazardous materials stored nearby or other potential atmospheric hazards.

DEFINITIONS

ALUMINUM HYDRAULIC SHORING

An engineered shoring system comprised of aluminum hydraulic cylinders (cross- braces), used in conjunction with vertical rails (uprights) or horizontal rails (walers). Such a system is designed specifically to support the sidewalls of an excavation and prevent cave-ins.

BENCHING

A method of protecting employees from cave-ins by excavating the sides to form a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

CAVE-IN

The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury or otherwise injure and immobilize a person.

COMPETENT PERSON

One who is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. All competent persons must complete the four hour Trenching and Shoring class, successfully pass the exam and be certified for successful completion of the class. A competent person should have and be able to demonstrate the following:

- Training, experience and knowledge of:
    - Soil analysis,
    - Use of protective systems, and Requirements of 29 CFR 1926 Subpart P.

- Ability to detect:
    - Conditions that could result in cave-ins,
    - Failures in protective systems,
    - Hazardous atmospheres, and
    - Other hazards including those associated with confined spaces.
- Authority to take prompt corrective measures to eliminate existing and predictable hazards and to stop work when required.

EXCAVATION

Any man-made cut, cavity, trench or depression in an earth surface, formed by earth removal.

Registered Professional Engineer - A person who is registered as a professional engineer.

SHIELD (SHIELD SYSTEM)

A structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees. Shields can be a permanent structure or be designed to move as work progresses. A shield may also be known as a trench box or trench shield.

SHORING (SHORING SYSTEM)

A structure such as a metal hydraulic, mechanical or timber shoring system that sup- ports the sides of an excavation and which is designed to prevent cave-ins.

SLOPING (SLOPING SYSTEM)

A method of protecting employees from cave-ins by excavating to form sides that are inclined away from the excavation so as to prevent cave-ins. The angle of incline varies with differences in such factors as the soil type, environmental conditions and application of surcharge loads.

TRENCH (TRENCH EXCAVATION)

A narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet or less, the excavation is also considered to be a trench.

GENERAL REQUIREMENTS

All excavations shall be made in accordance with the rules, regulations, requirements and guidelines set forth in 29 CFR 1926.650, .651, and .652; the Occupational Safety and Health Administration's standard on Excavations, except where otherwise noted.

PROCEDURES

A competent person shall be placed in charge of all excavations. Underground utilities must be located and marked before excavation begins. Employees are not allowed in the excavation while heavy equipment is digging.

INSPECTIONS

A competent person shall conduct inspections:

- Daily and before the start of each shift,
- As dictated by the work being done in the trench,
- After every rain storm,
- After other events that could increase hazards, such as snowstorm, windstorm, thaw, earthquake or dramatic change in weather,
- When fissures, tension cracks, sloughing, undercutting, water seepage, bulging at the bottom or other similar conditions occur
- When there is a change in the size, location or placement of the spoil pile, and
- When there is any indication of change or movement in adjacent structures.
- For excavations four feet or greater in depth, a trench inspection form shall be filled out for each inspection.

SOIL TYPES

TYPE A (MOST STABLE)

Clay, silty clay and hardpan (resists penetration). No soil is Type A if it is fissured, is subject to vibration of any type, has previously been disturbed or has seeping water.

TYPE B (MEDIUM STABILITY)

Silt, sandy loam, medium clay and unstable dry rock. Previously disturbed soils unless otherwise classified as Type C; soils that meet the requirements of Type A soil, but are fissured or subject to vibration.

TYPE C (LEAST STABLE)

Gravel, loamy sand, soft clay, submerged soil or dense, heavy unstable rock and soil from which water is freely seeping.

LAYERED GEOLOGICAL STRATA (SOILS CONFIGURED IN LAYERS)

The soil must be classified on the basis of the soil classification of the weakest soil layer. Each layer may be classified individually if a more stable layer lies below a less stable layer, i.e. where a Type C soil rests on top of stable rock.

TESTING METHOD

The competent person in charge of the excavation shall be responsible for determining whether the soil is Type B or C. If the competent person wants to classify the soil as Type C, they

do not need to do any tests. However, tests must be conducted to determine if the soil can be classified as Type B. To do this, the competent person shall use a visual test coupled with one or more manual tests.

VISUAL TESTS

In addition to checking the items on the trench inspection form, the competent person should perform a visual test to evaluate the conditions around the site. In a visual test, the entire excavation site is observed, including the soil adjacent to the site and the soil being excavated. The competent person must also check for any signs of vibration.

During the visual test, the competent person should check for crack-line openings along the failure zone that would indicate tension cracks. They should look for existing utilities that indicate that the soil has been previously disturbed, and if so, what sort of backfill was used. The competent person must also observe the open side of the excavation for indications of layered geologic structuring.

This competent person should look for signs of bulging, boiling or sloughing, as well as for signs of surface water seeping from the sides of the excavation or from the water table.

The area adjacent to the excavation should be checked for signs of foundations (or other intrusions) into the failure zone. The evaluator should check for surcharging and the spoil distance from the edge of the excavation.

MANUAL TESTS

Thumb penetration test: Attempt to press the thumb firmly into the soil in question. If the thumb penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. It should be noted that the thumb penetration test is the least accurate testing method.

- Dry strength test: Take a sample of dry soil. If it crumbles freely or with moderate pressure into individual grains it is considered granular (Type C). Dry soil that falls into clumps that subsequently break into smaller clumps (and the smaller clumps can only be broken with difficulty) it is probably clay in combination with gravel, sand or silt (Type B).
- Plasticity or wet thread test: Take a moist sample of the soil. Mold it into a ball and then attempt to roll it into a thin thread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B.

A pocket penetrometer, shearvane or torvane may also be used to determine the unconfined compression strength of soils.

SPOIL

TEMPORARY SPOIL

Spoil shall be placed no closer than two feet from the surface edge of the excavation, measured from the nearest base of the spoil to the cut. This distance should not be measured from the crown of the spoil deposit. This distance requirement ensures that loose rock or soil from the temporary spoil will not fall on employees in the trench. Spoil should be placed so that it channels rainwater and other run-off water away from the excavation. Spoil should be placed so that it cannot accidentally run, slide or fall back into the excavation.

PERMANENT SPOIL

Should be placed some distance from the excavation.

SURFACE CROSSING OF TRENCHES

Surface crossing of trenches should not be made unless absolutely necessary. However, if necessary, it is only permit- ted under the following conditions:

Vehicle crossings must be designed by, and installed under the supervision of, a registered professional engineer.

Walkways or bridges must:

Have a minimum clear width of 20 inches,

Be fitted with standard rails, and

Extend a minimum of 24 inches past the surface edge of the trench.

INGRESS AND EGRESS

Trenches four feet or more in depth shall be provided with a fixed means of egress. Spacing between ladders (or other means of egress) must be such that a worker will not have to travel more than 25 feet laterally to the nearest one.

Ladders must be secured and extended a minimum of 36 inches above the landing.

Metal ladders should not be used when electric utilities are present.

EXPOSURE TO VEHICLES

Employees exposed to vehicular traffic shall be provided with, and required to wear, reflective vests or other suitable garments marked with, or made of, reflectorized or high-visibility materials. Trained flag persons, signs, signals and barricades shall be used when necessary.

EXPOSURE TO FALLING LOADS

All employees on an excavation site must wear hard hats.

Employees are not allowed to work under raised loads.

Employees are not allowed to work under loads being lifted or moved by heavy equipment used for digging or lifting.

Employees are required to stand away from equipment that is being loaded or unloaded to avoid being struck by falling materials or spillage.

Equipment operators and truck drivers may remain in their equipment during loading and unloading if the equipment is properly equipped with a cab shield or adequate canopy.

WARNING SYSTEMS FOR MOBILE EQUIPMENT

The following steps should be taken to prevent vehicles from falling into a trench or excavation:

Barricades must be installed where necessary,

Hand or mechanical signals must be used as required, and

Trenches left open overnight shall be fenced and barricaded.

HAZARDOUS ATMOSPHERES AND CONFINED SPACES

Employees shall not be permitted to work in hazardous and/or toxic atmospheres. Such atmospheres include those with:

- Less than 19.5% oxygen,
- A combustible gas concentration greater than 20% of the lower flammable limit, and
- Concentrations of hazardous substance that exceed those specified in the Threshold Limit Values for airborne contaminants established by the ACGIH. All operations involving such atmospheres must be conducted in accordance with OSHA requirements for occupational health and environmental controls for personal protective equipment and for lifesaving equipment. Engineering controls (such as ventilation) and respiratory equipment may be required.

TESTING FOR ATMOSPHERIC CONTAMINANTS

If there is any possibility that the trench or excavation could contain a hazardous atmosphere, atmospheric testing must be conducted prior to entry. Conditions that might warrant atmospheric testing would be if the excavation was made in a land fill area or if the excavation was crossed by, was adjacent to or contained pipelines containing a hazardous material (for example, natural gas lines).

STANDING WATER AND WATER ACCUMULATION

Methods for controlling standing water must be provided, and should consist of the following, if employees must work in the excavation:

- Use of special support or shield systems approved by a registered professional engineer,
- Water removal equipment, such as pumps, used and monitored by a competent person,

- Removal of employees from the trench during rainstorms, and
- Trenches must be carefully inspected by a competent person after each rain and before employees are permitted to re-enter the trench.

BENCHING, SLOPING, SHORING AND SHIELDING REQUIREMENTS

All excavations or trenches four feet or greater in depth shall be appropriately benched, shored or sloped according to the procedures and requirements set forth in OSHA's Excavation standard, 29 CFR 1926.650, .651, and .652.

Excavations or trenches 20 feet deep or greater must have a protective system designed by a registered professional engineer.

Excavations under the base or footing of a foundation or wall requires a support system designed by a registered professional engineer.

Sidewalks and pavement shall not be undermined unless a support system, or another method of protection, is pro- vided to protect employees from their possible collapse.

DEFINITIONS

BENCHING

There are two basic types of benching, single and multiple, which can be used in conjunction with sloping. In Type B soil, the vertical height of the benches must not exceed 4 feet. Benches must be below the maximum allowable slope for that soil type. In other words, a 10-foot deep trench in Type B soil must be benched back 10 feet in each direction, with the maximum of a 45-degree angle. Benching is not allowed in Type C soil.

SLOPING

Maximum allowable slopes for excavations less than 20 feet based on soil type and angle to the horizontal are as follows:

Soil Type	Height/Depth Ratio	Slope Angle
Type B	1:1	45 Degrees
Type C	1.5:1	34 Degrees

A 10-foot-deep trench in Type B soil would have to be sloped to a 45-degree angle, or sloped 10 feet back in both directions. Total distance across a 10-foot-deep trench would be 20 feet, plus the width of the bottom of the trench itself. In Type C soil, the trench would be sloped at a 34-degree angle, or 15 feet back in both directions for at least 30 feet across, plus the width of the bottom of the trench itself.

SHORING

Shoring or shielding are used when the location or depth of the cut makes sloping back to the maximum allowable slope impractical. There are two basic types of shoring, timber and aluminum hydraulic.

Because physical plants have aluminum hydraulic shores, they will be the focus of this section. Hydraulic shoring provides a critical safety advantage over timber shoring because workers do not have to enter the trench to install them. They are also light enough to be installed by one worker; they are gauge-regulated to ensure even distribution of pressure along the trench line; and they can be adapted easily to various trench depths and widths. However, if timber shoring is used, it must meet the requirements of 29 CFR 1926.650, .651, and .652.

All shoring shall be installed from the top down and removed from the bottom up. Hydraulic shoring shall be checked at least once per shift for leaking hoses and/or cylinders, broken connections, cracked nipples, bent bases and any other damaged or defective parts.

The top cylinder of hydraulic shoring shall be no more than 18 inches below the top of the excavation.

The bottom of the cylinder shall be no higher than four feet from the bottom of the excavation. (Two feet of trench wall may be exposed beneath the bottom of the rail or plywood sheeting, if used.)

Three vertical shores, evenly spaced, must be used to form a system.

Wales are to be installed no more than two feet from the top, no more than four feet from the bottom and no more than four feet apart vertically.

In Soil Type B, hydraulic shores must be installed in accordance with Table D - 1.2 and Table D - 1.3.

In Soil Type C, hydraulic shores must be installed with sheeting in accordance with Table D - 1.4.

Here are some typical installations of aluminum hydraulic shoring:

- Vertical aluminum hydraulic shoring (spot bracing),
- Vertical aluminum hydraulic shoring (with plywood),
- Vertical aluminum hydraulic shoring (stacked), and
- Aluminum hydraulic shoring waler system (typical).

SHIELDING

Trench boxes are different from shoring because, instead of shoring up or otherwise supporting the trench face, they are intended primarily to protect workers from cave-ins and similar incidents.

The excavated area between the outside of the trench box and the face of the trench should be as small as possible.

The space between the trench box and the excavation side must be backfilled to prevent lateral movement of the box. Shields may not be subjected to loads exceeding those which the system was designed to withstand.

Trench boxes are generally used in open areas, but they also may be used in combination with sloping and benching.

The box must extend at least 18 inches above the surrounding area if there is sloping toward the excavation. This can be accomplished by providing a benched area adjacent to the box.

Any modifications to the shields must be approved by the manufacturer.

Shields may ride two feet above the bottom of an excavation, provided they are calculated to support the full depth of the excavation and there is no caving under or behind the shield.

Workers must enter and leave the shield in a protected manner, such as by a ladder or ramp.

Workers may not remain in the shield while it is being moved.

FOR ADDITIONAL INFORMATION SEE OSHA CONSTRUCTION STANDARDS PART 9: Excavation, Trenching and Shoring

PROJECT SITE SAFETY POLICY

This standard practice establishes the responsibilities of both the trade contractor and Taylor Davis Landscape & Construction regarding safe worksite practices.

TRADE CONTRACTOR SELECTION

The following list of minimum requirements will be considered by the general contractor during an evaluation of past safety performance before contracting for work.

- Trade contractor injury records, such as Experience Modification Rate (EMR or MOD) for workers compensation for the past three years and the safety record in performing jobs of a similar nature. MOD rate 1.0 goal,
- OSHA logs which include the injury and illness rates (number of lost time accident cases, number of recordable cases, number of restricted work day cases, number of fatalities) for the **past three years**,
- Incidence rates for lost-time accidents and those recordable for the **past three years**,
- Written safety programs and training records indicating application of the program,
- General skill level, knowledge and past performance of similar projects, and
- Proper maintenance of equipment, up-to-date permits, licenses and certifications.

Taylor Davis Landscape & Construction, as the general contractor, will also determine past compliance with safety regulations through:

- Obtaining copies of any citations or violations within the last three years, and
- Requiring bidders to provide safety program information in writing.

WORK SITE GUIDELINES FOR TRADE CONTRACTORS

Trade contractors are to schedule a pre-start safety meeting with the field manager prior to beginning work.

Designate a representative to coordinate all safety and health issues and to communicate with the general contractor.

Ensure that the appropriate job skills, equipment, knowledge, experience, expertise, permits, licenses, certifications, and skilled tradespeople are assigned.

Provide documentation of safety training.

Provide information on the safety and health hazards that may arise during the scope of work and the means necessary to avoid danger from those hazards, including personal protective equipment, confined space, Lock Out/ Tag Out, etc.

Obtain from the general contractor, and the site owner if necessary, any safety rules and regulations in effect at the site or potential hazards present that may affect the job. Trade contractors are responsible to ensure that their employees:

- Know what personal protective equipment is required and use it,
- Understand that under the Occupational Safety and Health Act (OSHA) they cannot remove or destroy safe- guards or devices on machinery,
- Have been informed of their rights, under OSHA, to work in an environment free from recognized hazards,
- Know the appropriate clothing to wear to work, pertaining to the machinery they may use or operate, and that personal items such as rings, jewelry and long hair may be dangerous around machinery,
- Have been trained in the proper use of equipment and tools,
- Have been trained in proper materials lifting and handling,
- Understand what "Lock Out" means for equipment when it is under repair or service, and will observe proper procedures,
- Will not repair or adjust machinery unless authorized to do so,
- Have been instructed in housekeeping rules, proper storage of materials and clean-up procedures,
- Have been informed about the "Right to Know" law and the specific hazards of any chemicals to which they may be exposed,
- Have been trained in emergency procedures and know where fire extinguishers are located,
- Know what to do if there is a chemical spill,
- Know who to report near miss/good catch incidents to, as well as injuries,
- Understand and follow the trade contractor's substance abuse policy,
- Have been instructed on how to handle a situation if any unsafe condition arises on the job, or if they are re- quested to perform a job that they are not qualified or trained to do,
- Have awareness of emergency signals and procedures, including telephone numbers of the nearest hospital, ambulance service and fire department,
- Are training in hazardous conditions including any Hazard Communication or other information provided to the trade contractor,
- Designate a site safety coordinator,
- Establish necessary safe practices to permit without endangering the site owner's property and personnel,
- Use only the plant, building or project site entrance designated and follow the facility/site access control practice,
- Notify the designated safety representative immediately of any OSHA recordable injury or illness to trade con- tractor employees and provide a copy of each accident report,
- Receive and use a copy of the facility's or contractor's written safety policies and procedures, and

- Upon completion of the job, cleaning all pertinent work areas and disposing of any discarded materials in a proper and legal manner.

RECORD KEEPING

These records are considered to be a minimal set of necessary documents for controlling and reporting safe practices.

Record	Trade Contractor	General Contractor
Training of employees	Own	Own
Telephone numbers of nearest hospital, fire department and ambulance service	X	X
SDS sheets	X	X
OSHA recordable injury and illness log	X	X
Contract copy with safety and health job aspects	X	X
Pre-work, start-up inspection		X
Memos, letters and all communication made to the trade by the general	X	X

PROJECT SITE GUIDELINES

Designate a representative to coordinate and communicate all safety and health issues on a weekly basis. The designated representative will have a copy of the job assignment and be thoroughly familiar with its contents. They will be knowledgeable of all safety and health aspects of the work, or know who to call to obtain this information.

Provide a copy of the site owner's written safety policy and procedures or appropriate operating practices to trade contractors.

Inform trade contractors of any emergency signals and procedures that may be put into operation. Trade contractors should be given telephone numbers of the nearest hospital, ambulance and fire department.

Conduct an inspection of the work site before the start-up meeting to identify hazards (particularly non-obvious hazards) and share the results with all trade contractors. Review all contract requirements related to safety and health, including but not limited to, rules and procedures, personal protective equipment (PPE) and special work permits or specialized work procedures. Advise the trade contractor that the company safety and health policies must be followed.

Work directly with the trade contractor's designated safety representative.

After conclusion of the contract work, complete a Project Evaluation Form including details about the trade con- tractor's safety performance, to be used for future reference, with recommendations on whether or not to rehire the contractor.

DOCUMENTATION AND RECORD KEEPING

Onsite records required of general contractors and trade contractors are listed in the table above. Any additional documents made available at a project site relative to safe practices need to be retained by both the contractor and trade contractor.

ACKNOWLEDGMENTS

Each trade contractor is expected to participate in a pre-start meeting with the field manager. This meeting is held to address the specific requirements of Taylor Davis Landscape & Construction regarding project site safety. The trade contractors must sign the Acknowledgment of Taylor Davis Landscape & Construction Safety Program recognizing the contractual requirement to completely abide by Taylor Davis Landscape & Construction and all governing bodies. See the acknowledgment form on the next page.

ACKNOWLEDGMENT OF TAYLOR DAVIS LANDSCAPE & CONSTRUCTION SAFETY PROGRAM

The undersigned contractor/supplier representative has participated in a Construction Pre-Start Safety Meeting. Each participant has been specifically informed of what is expected of them with regard to safety during the course of the project. Each company has been specifically informed that they are to abide by all governing bodies' (OSHA, Department of Labor, etc.) rules and regulations or Taylor Davis Landscape & Constructions Safety Program (whichever promotes higher personal safety). Each contractor's site supervisor and/or corporate safety officer will fully cooperate, support and strictly enforce these safety programs with its personnel. The penalty of noncompliance has been contractually addressed and could result in contract termination.

Signature:_____

Name Printed:_____

Company Name: _____

Date:_____

SECTON 4

SAFETY ACCOUNTABILITY PROGRAM

The Safety Accountability Program provides an accountability mechanism to ensure that all of our employees, temporary employees and trade contractors are adequately protected from hazards. Further, it promotes uniform safety practices and procedures throughout the organization.

SCOPE

The Safety Accountability program covers all field employees.

EMPLOYEE CORRECTIVE ACTION

FIRST OFFENSE

An employee involved in an unsafe act will be given a verbal warning if the following conditions exist:

- The unsafe act violates company safety standards,
- This is the employee's first violation of company safety standards, or
- There is a low probability (determined by the safety director) that the unsafe act could result in serious personal injury or property damage.

SECOND OFFENSE

An employee involved in an unsafe act will be given one day off without pay if the following conditions exist:

- The unsafe act violates company safety standards and documentation exists indicating employee acknowledgment,
- This is the employee's second violation of company safety standards, or
- There is a high probability (determined by the safety director) that the unsafe act could result in serious personal injury or property damage.

THIRD OFFENSE

An employee involved in an unsafe act will be given three days off without pay if the following conditions exist:

- The employee has previously received discipline for the same or similar violation, or
- There is a high probability (determined by the safety director) that the unsafe act could result in serious personal injury or property damage.

FOURTH OFFENSE

Any employee involved in an unsafe act will be immediately terminated if the following conditions exist:

- The employee has previously received discipline for the same or similar violation,
- The employee has previously received discipline for different unsafe acts, or

- There is a high probability (determined by the safety director) that the unsafe act could result in serious personal injury or property damage.

The safety director will determine if the above conditions exist. In the event of an OSHA citation, TLC will review the actions of the individual employee and/or team to determine disciplinary measures.

MANAGEMENT CORRECTIVE ACTION

If a member of management (project managers and/or field managers) is observed performing an unsafe act, follow the Employee Corrective Action, or if the member of management receives disciplinary action under the following scenarios, consistent with:

- Scenario 1 - As a result of a self-audit (observation was by designated company personnel),
- Scenario 2 - As a result of an audit conducted by a third-party (OSHA, consultant or higher level of project management) and,
- No previous history with the same issue with any of their employees, or
- No documented training, toolbox or job-specific safety plan covering the same issue.
- As a result of an audit by a third-party (OSHA, consultant, or higher level of management) and,
- Previous history with the same issue with any of their employees, or
- Documented training, toolbox or job-specific safety plan covering the same issue.

Then, the following action will be taken:

LEVEL A – SCENARIO 1 OR 2 - TRAINING

The supervisor must train employees on the issue at the next toolbox talk (toolbox talk will be written by the safety director to address the specific issue). A training record must be generated by the supervisor, signed by all trainees and submitted to the safety director.

This toolbox talk will be distributed to all employees and all employees must sign, acknowledging training on the specific issue.

Number of Safety Violations				
1	2	3	4	5
Clear	Verbal warning up to potential termination (based on severity and safety director's discretion).	Written warning and one day layoff up to potential determination (based on severity and safety director's discretion).	Written warning and three days layoff up to potential determination (based on severity and safety director's discretion).	Termination (based on severity and safety director's discretion).

SECTION 5

Preconstruction Safety Checklist

Project Name: _____ Date: _____

Trailer/Office Requirements:

Yes	No	N/A	
			Is there an Safety Manual on site?
			Are all required postings up and easily visible?
			Do you know the site evacuation route and routine?
			Are emergency phone numbers listed and is there a map to an emergency facility?
			Do you have extra hard hats for visitors?
			Have employees been through an appropriate owner training program?
			Do you have the owner required safety regulations?
			Does the site have a phone and camera available?
			Are SDS sheets on site?
			Is there a designated smoking area?
			Is there a fully stocked first aid kit?

Before Construction Begins:

Yes	No	N/A	
			Has Dig Safe been called (811)?
			Are welding permits required?
			Has an Asbestos and Lead Inspection been done?
			Are the required safety signs in place (i.e. hard hats required, overhead power lines, etc.)?
			Is there a site evacuation plan?
			Has a job audit for hazards been completed (overhead power lines, confined spaces, etc.)?
			Has the project identification sign been installed to formally identify the site for material deliveries, emergency response vehicles, etc.?
			Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable eye washing facilities shall be provided within the work area.

Trade Contractor Audit:

Yes	No	N/A	
			Are Site Specific Safety Plans complete (fall protection, scaffolding, buddy system, etc.)?
			Are First Aid/CPR trained personnel identified?
			Has a person been identified as the site safety inspector?
			Have SDS sheets been completed and submitted by all trade contractors?
			Has our safety program been reviewed with all trades (and obtained a signed acknowledgment form in return)?

GENERAL PROJECT SITE SAFETY RULES

PERSONAL PROTECTION EQUIPMENT (PPE)

Hard hats are required at all times when on the project site. Wearing hard hats backwards is prohibited.

Safety glasses are required at all times when on a project site.

Hearing protection will be properly worn when operating, or near to, saws or other high noise producing equipment.

A high visual vest/shirt/jacket is required when working around any moving equipment including, but not limited to, hi-los, forklifts, heavy equipment, etc.

SCAFFOLDING

Must be erected, inspected and disassembled by trained/competent personnel, include toe kicks, mid/top rail, proper planking, etc

ELECTRICAL

A ten foot minimum clearance shall be maintained from energized overhead electrical lines (including materials, personnel, ladders, forklifts, cranes, etc.).

GFCI protection must be used with temporary power or any time extension cords are used.

Electrical cords must be free of defects.

FALL PROTECTION

When exposed to a fall hazard of six feet or more, employees must follow the site specific fall protection plan at all times. This may include standard barriers, scaffolding, approved ladders, fall arrest/lanyard systems and/or a safety monitor system.

A full body harness and lanyard must be worn and properly attached to the basket while operating a boom lift or while working in a man cage attached to a crane or forklift.

Floor holes (excluding keyways, small notches, etc.) shall be protected with covers that are labeled “HOLE”, fastened to the floor and able to support any load in the area.

GUARDING

Guards, shields and other protective apparatus are required to be attached and properly secured to machines and tools.

HOUSEKEEPING

Housekeeping will be maintained in all work areas.

Cut-offs will be piled in designated areas and removed promptly.

Walking/working areas on deck will be maintained, clear and unobstructed.

All materials and tools shall be kept at least six feet from an unprotected edge of an elevated work area.

LADDERS

Extension ladders shall be positioned using proper slope (four-to-one ratio) and the safety feet must be properly set.

Extension ladders used to access an upper landing surface shall extend above the surface by three feet and shall be securely tied off at the top.

Step ladders will be used in the open position with the spreader bars in the locked position.

Step ladders shall not be used to access an upper level.

Employees shall not stand on the top rung of any ladder unless the ladder is designed for such use.

Ladders shall be inspected before each use. Ladders are not to be used if the rails or rungs are damaged, bent, cracked or otherwise compromised.

LOCK OUT

Lock Out procedures for any equipment will be followed during cleaning, repair, set-up, service, unjamming, maintenance or other non-production service work where inadvertent activation of the machine could cause injury. Tools that are out of service for repair will be tagged "Dangerous – Do Not Use" or the plug/cord shall be cut off.

MATERIAL HANDLING

Compressed gas cylinders shall be secured at all times to prevent them from falling.

When stored, cylinders shall have valve caps properly secured.

Oxidizing gases shall be segregated from fuel gases or other combustible liquids when not in use. When transporting cylinders by truck, segregation is not required unless they will be stored on the truck for more than 24 hours.

Forklift and aerial lift operators shall carry a valid permit with them or have it readily available at the project site.

Seatbelts shall be used on any equipment that has them installed.

Rigging and material handling equipment shall be properly maintained and used within rated capacities.

Certified riggers and signal men are required for rigging and hoisting of any materials with equipment on the project.

SUSPENDED LOAD

Employees shall not work or walk under a suspended load. When working adjacent to a suspended load that is at the same level, employees must ensure they are not in a crush hazard zone. Crane operators shall not move a load over employees
Use of alcohol and drugs are strictly prohibited.

Proper Attire

- Long pants
- Shirts with sleeves
- Work boots
- Company uniform

No fighting or horseplay will be tolerated. Any employee(s) caught violating this requirement will be subject to per- manent removal from the project at Taylor Davis Landscape & Construction discretion.

The use of radios or "ear-buds" to listen to music while working on the job is not allowed.
All accidents, incidents, etc. are to be reported to your foreman and the field manager immediately.

Review site conditions every morning before going to work to address changing elements such as weather, work area conditions and access/egress points.

Safety signs and warning signs must be followed at all times.

The above is a basic list and covers common safety practices and is not all inclusive. FOLLOW ALL OSHA RULES, as well as all other site specific rules.

VIOLATION OF SAFETY RULES

The following steps will be taken for any person violating Taylor Davis Landscape & Construction or OSHA's safety rules:

First Violation: At minimum, verbal notice of violation.
Second Violation: At minimum, written notice of violation.
Third Violation: At minimum, written notice of violation and removal from project site for one or more days.

SPECIFIC SAFETY PLAN

Trade Company:		Prepared By (Name/Title):	
Project Name and Location:		Onsite Competent Person:	
Date Prepared:		Reviewed By (Name/Title):	

Site Specific Safety Plan
Notes (field notes, review comments, etc.):

Job Steps	Hazards	Controls	Relevant OSHA Standards

Equipment to be used:

Signatures:			
Name:		Signature:	
Name:		Signature:	
Name:		Signature:	
Name:		Signature:	
Name:		Signature:	

EMERGENCY INFORMATION

Site Address: (or nearest intersection)	
Site Phone Number:	
Emergency Services:	911
Local Urgent Care Center:	
Poison Center:	1.800.222.1222

EV Field Manager		EV Project Manager	
Name:		Name:	
Cell Phone:		Cell Phone:	
EV Safety Director		**EV Chief Operating Officer**	
Name:	Joe Novakoski	Name:	Tony Roussey
Cell Phone:	616.836.1810	Cell Phone:	616.836.0469
EV Safety Coordinator		**EV Assistant Safety Director**	
Name:	Lauren Dodd	Name:	Scott Wondergem
Cell Phone:	215.808.3010	Cell Phone:	616.292.6289
EV Home Office		**Additional Office Contacts**	
Phone:	616.392.2383	Assistant Project Manager:	
Alternate Phone:	800.632.7734	Project Coordinator:	
Fax:	616.392.3752	Marketing Representative:	

First Aid/CPR Trained Employees		
Name:	Company:	Cell Phone Number:

Inclement Weather Policy:
Lightning Policy: Stay off equipment/scaffolding for 30 minutes from last sighting.
Tornado Watch: Meet at construction office for weather update and plan for evacuation in the event of Tornado Warning.

GOOD CATCH REPORT

A good catch is the identification of a potential hazard or incident that eliminated the risk for any personal injury. Unsafe working conditions, unsafe employee work habits, improper use of equipment or use of malfunctioning equip- ment have the potential to cause work related injuries. It is everyone's responsibility to report and/or correct the potential accidents/incidents immediately. Please use this form as a means to report these good catch situations.

Department/Location: _____

Date: _____ Time: _____ AM [ ] PM [ ]

Please check all appropriate conditions:
Unsafe Act [ ] Unsafe Condition [ ] Unsafe Equipment [ ] Unsafe Use of Equipment [ ]

Description of the good catch and the incident or potential hazard identified

Employee Signature: _____ Date: _____

GOOD CATCH INVESTIGATION

Description of the good catch circumstances:

Causes (primary and contributing):

Corrective action taken (remove the hazard, repair, replace or retrain in the proper procedures for the task):

Signed: _____ Date: _____

Not completed for the following reason:

Management Signature: _____ Date: _____

CONFINED SPACE ENTRY PERMIT

Confined Space Location/Description/ID Number **Date:**

_____

Purpose of Entry

_____

_____

Time In: _____ **Permit Canceled Time: _____**

Time Out: _____ **Reason Permit Canceled: _____**

Supervisor: _____

Rescue and Emergency Services-

Hazards of Confined Space	Yes	No	Special Requirements	Yes	No
Oxygen deficiency			Hot Work Permit Required		
Combustible gas/vapor			Lockout/Tagout		
Combustible dust			Lines broken, capped, or blanked		
Carbon Monoxide			Purge-flush and vent		
Hydrogen Sulfide			Secure Area-Post and Flag		
Toxic gas/vapor			Ventilation		
Toxic fumes			Other- List:		
Skin- chemical hazards			**Special Equipment**		
Electrical hazard			Breathing apparatus- respirator		
Mechanical hazard			Escape harness required		
Engulfment hazard			Tripod emergency escape unit		
Entrapment hazard			Lifelines		
Thermal hazard			Lighting (explosive proof/low voltage)		
Slip or fall hazard			PPE- goggles, gloves, clothing, etc.		
			Fire Extinguisher		

Communication Procedures:

_____

DO NOT ENTER IF PERMISSABLE ENTRY LEVELS ARE EXCEEDED		**Test Start and Stop Time:** **Start**	**Stop**
	Permissable Entry Level		
% of Oxygen	19.5 % to 23.5 %		
% of LEL	Less than 10%		
Carbon Monoxide	35 PPM (8 hr.)		
Hydrogen Sulfide	10 PPM (8 hr.)		
Other			

Name(s) or Person(s) testing: _____

Test Instrument(s) used- Include Name, Model, Serial Number and Date Last Calibrated:

CFM-Ventilation	Size-Cubic Feet	Pre Entry Time	❑ Central Notified Before Entrance	Time Notified:
			❑ Central Notified After Entrance	Time Notified:

Authorized Entrants	Authorized Attendants
_____	_____
_____	_____
_____	_____

PERMIT AUTHORIZATION **I Certify that all actions and conditions necessary for safe entry have been performed.**	
Name-Print:	
Signature:	
Date:	Time:

Entry Procedure Checklist: Complete the following steps before, during, and after a confined space entry:

Step 1
Obtain a Permit-Confined Space Entry Form from Program Coordinator.
Step 2
Notify Supervisor before the **Confined Space Entry**
Step 3
Verify Confined Space Meter has been calibrated and is in working order
Step 4
Complete the top portion of the Permit-Confined Space Entry Form
Step 5
Ensure all rescue equipment (e.g. tripod, body-belt, lanyard) is in place prior to entry
Step 6
Monitor the confined space with the MSA 4-Gas Detector prior to entry. The entrant and attendant should sign the permit authorization section on the bottom of the permit to ensure all actions and conditions necessary for safe entry have been performed.
Step 7
Employee entering the confined space should wear the 4-Gas Detector after the pre-atmosphere test. The employee should also have a full body harness and lanyard attached to the rescue tripod. Employee shall have a radio and any other necessary personal protective equipment.
Step 8
Employee can enter the confined once Step 7 is completed. The entrant and attendant should complete the Hazards of Confined Spaces and Special Requirements Section of the Permit-Confined Space Entry Form once the employee is within the confined space. The entrant should also gather the % Oxygen, % Explosive Gases, Carbon Monoxide, and Hydrogen Sulfide readings and communicate them to the attendant to place on the Permit Form.
Step 9
The attendant should maintain constant communication with the entrant until the entrant has exited the confined space.
Step 10
The attendant should contact Supervisor once the entrant has exited the confined space.
Step 11
The Permit-Confined Space Entry Form should be given to program coordinator, to file in the Confined Space Records.

Respirable Crystalline Silica Written Exposure Control Plan

Company Name:

Person Completing the Plan: _____

Date: _____

Competent Person:_____

Task (check all that apply):

Routine Task [ ] Indoor [ ] Outdoor [ ] Found on Table 1 [ ]

If deviating from a routine task (as listed in Table 1) an alternative exposure plan must be competed, including air sampling. Description of Task:

Engineering Controls:

Respiratory Protection:

Housekeeping:

Alternative Exposure Plan (if needed):

Air Sampling (8 Hour Average PEL)

Date: _____ Air Sample Results: _____

Date: _____ Air Sample Results: _____

Date: _____ Air Sample Results: _____

If air sample is below the Action Level (25 µg/m3), work may proceed. If air sample is below the Permissible Exposure Level (50 µg/m3), but above Action Level (25 µg/m3) work may proceed. If air sample is above the Permissible Expo- sure Level (50 µg/m3), no work may proceed until engineering controls are introduced to reduce the sampling results below 50 µg/m3.

Respirator Permit

Respirator
Permit

This medical exam authorizes:

3M 9920 [ ] 3M 8710 [ ] CM 7000 [ ]

Or equivalent respirator: _____

SECTION 6

OSHA INSPECTIONS

In order to protect employees from workplace accidents and injuries, and to ensure a safe and healthy place of employment, OSHA enforces workplace safety and health standards through periodic inspections.

The OSHA regulations are administered and enforced by the Department of Consumer and Industry Services, Bureau of Safety and Regulation. OSHA grants inspectors the authority to enter, inspect, mandate abatements of prohibited conditions and propose fines and penalties.

Inspections most often occur because of:

- An employee complaint filed with OSHA,
- A random inspection program, or
- Accident investigation.

PROCEDURE

Request photo identification and credentials of the compliance officer.

NOTIFICATION

- Immediately contact the company safety director or project manager. Request that the compliance officer (CO) await the arrival of the safety director or project manager prior to beginning the inspection. If the safety office or project manager are not able to participate in the inspection, onsite supervisors may proceed.
- The CO should be treated as a guest and assured that all EV personnel will be cooperative during the inspection.

PROCESS

OPENING CONFERENCE

- Establish the type and scope of inspection (if "complaint", restrict the scope of the inspection to the complaint),
- Provide a copy of the anonymous complaint if there is one,
- Perform the inspection and any necessary interviews during normal working hours, and
- The CO may, at this time, review all required OSHA record keeping documents such as the injury/illness log (Form 300) and written programs or procedures that apply such as Hazard Communication (Right-to-Know) and Lock Out/Tag Out.

THE INSPECTION

- Document all conversations with, and observations made by, the CO (except private interviews with non-management employees),
- Photograph and take measurements of any questionable compliance issues. Take photographs or videos in any situation where the CO may video or take

photographs in order to replicate their observations,
- Include a trade contractor representative in the inspection when appropriate, and
- Provide only the information requested by the CO.

CLOSING CONFERENCE

- The closing conference should have the same attendees as the opening conference. The CO will present specific information related to potential violations. EV representatives should discuss any items/issues of concern with the CO and receive specific information regarding the violations, as well as possible charges and abatement requirements,
- Post the inspection citations and follow-up needs, and
- Following the OSHA office review, the citation will be sent to the employer by certified mail. A copy of the citation(s) will remain posted until all items are corrected, or for at least three working days, whichever is longer.

  Note: Other governmental officials may appear unannounced, such as the local Health Department Inspector, Fire Inspector, Department of Environmental Quality Representative or others. Follow the same procedures identified on the previous page.

EMPLOYEE RIGHTS AND RESPONSIBILITIES UNDER OSHA

Worker safety and health protection is the purpose of OSHA. The following are some of the rights and responsibilities employees have under the Act.

EMPLOYEE'S RIGHTS

Work in an environment that is free of recognized hazards that may cause serious physical harm or death,

Voice their safety and health concerns without fear of reprisal, punishment, discrimination or discharge,

Review copies of appropriate OSHA standards, rules, regulations and requirements,

Request and receive adequate information and training from the employer on safety and health hazard prevention in the workplace, and procedures to follow when an accident or exposure to toxic substances occurs,

Be provided access to records of any exposure to potentially toxic substances or harmful physical agents, which are required to be monitored or measured by OSHA standards,

Request OSHA to investigate if the employee believes hazardous conditions or a violation of standards exist in the workplace,

Have his or her identity kept confidential, if he or she so requests, when making a signed, written complaint to OSHA,

Have the authorized employee representative accompany the OSHA CO during an inspection tour, and

Request a closing discussion with the compliance officer following an inspection.

EMPLOYEE'S RESPONSIBILITIES

Comply with applicable safety procedures, programs and OSHA standards,

Follow all employer safety and health rules and regulations, and wear or use prescribed protective equipment while engaged in work,

Report hazardous conditions to the supervisor,

Report any job-related injury or illness to the employer seek treatment promptly using proper procedures,

Cooperate with the OSHA CO conducting an inspection,

Exercise employee rights under the Act in a responsible manner,

Read the OSHA poster at the project site, and

Note damage, move or remove any safety-related item that is provided; or, do anything that would interfere with the use of that item by another person.

Employees who violate OSHA regulation rules will be subject to disciplinary action. Employer Rights and Responsibilities Under OSHA

Employers have certain rights and responsibilities under the Occupational Safety and Health Act/Act 154 of 1974.

EMPLOYER'S RIGHTS

Seek advice and consultation from the OSHA office (OSHA will not conduct an inspection merely because an employer requests assistance),

Contest any notice of citation and proposed penalties received by filing a notice of contest with OSHA within 15 working days of receipt, and

Apply to OSHA for permanent variance from a standard, if the facility or its methods of operation protect employees at least as effectively as the standard.

EMPLOYER'S RESPONSIBILITIES

Provide a safe and healthful workplace free of recognized hazards that are causing, or are likely to cause, death or serious physical harm to employees,

Comply with all standards, rules and regulations issued under the Act,

Inform all employees about OSHA (through posting of the "Safety & Health Protection on the Job" poster),

Be familiar with OSHA standards applicable to their operations, and make copies available to employees for re- view,

Inspect workplace conditions so that they conform to applicable standards,

Eliminate or control recognizable hazards,

Make sure employees have and use safe tools, equipment and personal protective equipment and that such equipment is properly maintained,

Use color codes, posters, labels or signs to warn employees of potential hazards,

Establish or update safety and health operating procedures so that employees follow safety and health requirements,

Provide training required by OSHA standards such as the Hazard Communication Standard, the Occupational Noise Exposure Standard, the Powered Industrial Truck Standard, etc.

Notify the OSHA office within 8 hours of any accident resulting in the hospitalization of three or more employees simultaneously, or a fatality using the OSHA fatality hotline 1.800.231.6742.

Maintain OSHA required records of work-related injuries and illnesses, and post a copy of the 300 Log totals from February 1 to April 30,

Provide employees, former employees and their representatives access to the OSHA 300 Log in a reasonable amount of time,

Provide access to medical and exposure records, to employees and/or their authorized representatives (by writ- ten request),

Never discriminate against an employee who properly exercises rights under the Act,

Post any OSHA citations near the worksite involved (any citations must remain posted until the violation has been abated, or for three working days, whichever is longer) and

Abate cited violations within the prescribed time period.

SERIOUS/FATAL INCIDENT GUIDELINE

WHAT EVERY PROJECT SITE OFFICIAL MUST HAVE

Completed Project Site Set-Up/Preconstruction Safety Checklist (Section 5 of the Safety Manual)

A telephone or mobile phone.

A list of emergency numbers to call (a copy should be carried by the field manager).

- 911 or local emergency number,
- Taylor Davis Landscape & construction Co. office number, 413-256-0870
- If an incident occurs during business hours, call Human Resources and the Safey Manager at 413-230-2461, and
- If an incident occurs outside normal business hours, contact Taylor Davis 413-575-0058
- At least one person per trade (or one per project site if publicly posted) must be certified in CPR and Standard First Aid (Certification for CPR must be renewed every year and First Aid must be renewed every three years for legality. Being certified will protect the care-giver through the "Good Samaritan Act" as long as care was given using the method taught at training).
- Location of closest hospital or clinic, with a map and directions describing how to get there.

FIELD MANAGER'S COURSE OF ACTION

CHECK THE SITUATION:

Is it safe for the field manager and/or CPR/First Aid certified person to approach the victim?

If the situation is unsafe, immediately evacuate all people to a place clear of the danger. Gather as much information (strange smells, exposed electrical wiring, exposed pipes, etc.) as possible without placing anybody in danger.

If the situation is safe, appraise how badly the person is injured using standard First Aid/CPR protocols.

Call Emergency Medical Services (EMS). After EMS is on the scene and information is exchanged, contact the EV main office.

If there are bystanders, send one person to make the required calls. Give the person as much information about the situation as possible.

If not alone, make the call to EMS first and quickly get back to the victim. When EMS arrives, tell them everything known about the situation and then call EV Construction's project manager and general superintendent immediately thereafter. If calling after normal business hours, contact your project manager at home or follow the procedures stated above.

The project manager and field manager must contact the company president, safety director and the project owner. The president will send a task force to assist the safety director in reviewing the incident and will pro- vide a project site safety walk-through.

If CPR/First Aid certified, give the best care possible until help arrives (Reminder: If the victim is conscious, ask for permission before administering first aid. If unconscious, proceed with evaluation of victim -- airway blocked? breathing? circulation/pulse?) If one of the other contractors or bystanders is certified in CPR/First Aid and offers to help, let them. A second person can keep bystanders at bay, take down important information, make the proper calls and provide relief for CPR administration.

Only a certified person should administer either CPR or First Aid. If the victim is caused more harm, the person administering the CPR, and possibly Taylor Davis Landscape & Construction, could be held accountable.

AFTER EMS HAS ARRIVED AND TAKEN OVER

Call Taylor Davis Landscape & Construction if it has not been done.

Take pictures of the accident site and make notes of what the situation looked like upon arrival. Note the actions taken to care for the situation.

If witnesses were present when the accident happened, get as much information from them as possible.

After consulting the safety manual, talk with OSHA to see what may have caused the accident and what steps can be taken to prevent the same (or similar) situation in the future.

Fill out the accident report while the information is still fresh and send it through the proper channels.

If in need of counseling, let Human Resource Department know as soon as possible.

DEALING WITH THE MEDIA

Though the media may make requests, field managers should say nothing. Do not make assumptions or personal observations! Direct the media to someone at the corporate level (president or safety director). Give specific information only to:

- Emergency Medical Service (EMS),
- Police,
- Taylor Davis Landscape & Construction Construction's safety director, human resource personnel, project manager, vice president or president, and
- If a statement to the media is unavoidable, please simply state, "I am not at liberty to speak on this matter.

Employee's Report of Injury Form

Instructions: Employees shall use this form to report all work related injuries, illnesses, or "near miss" events (which could have caused an injury or illness) – *no matter how minor*. This helps us to identify and correct hazards before they cause serious injuries. This form shall be completed by employees as soon as possible and given to a supervisor for further action.

I am reporting a work related: ❑ Injury ❑ Illness ❑ Near miss	
Your Name:	
Job title:	
Supervisor:	
Have you told your supervisor about this injury/near miss? ❑ Yes ❑ No	
Date of injury/near miss:	Time of injury/near miss:
Names of witnesses (if any):	
Where, exactly, did it happen?	
What were you doing at the time?	
Describe step by step what led up to the injury/near miss. (continue on the back if necessary):	
What could have been done to prevent this injury/near miss?	
What parts of your body were injured? If a near miss, how could you have been hurt?	
Did you see a doctor about this injury/illness? ❑ Yes ❑ No	
If yes, whom did you see?	Doctor's phone number:
Date:	Time:
Has this part of your body been injured before? ❑ Yes ❑ No	
If yes, when?	Supervisor:
Your signature:	Date:

Supervisor's Accident Investigation Form

Name of Injured Person _____

Date of Birth _____ Telephone Number _____

Address _____

City _____ State_____ Zip _____

(Circle one) Male Female

What part of the body was injured? Describe in detail. _____

_____

What was the nature of the injury? Describe in detail. _____

_____

_____

Describe fully how the accident happened? What was employee doing prior to the event? What equipment, tools being using? _____

_____

_____

Names of all witnesses:

_____ _____

_____ _____

Date of Event _____ Time of Event _____

Exact location of event: _____

What caused the event? _____

_____

_____

Were safety regulations in place and used? If not, what was wrong? _____

_____

Employee went to doctor/hospital? Doctor's Name _____

Hospital Name _____

Recommended preventive action to take in the future to prevent reoccurrence.

_____

_____

_____

_____ _____

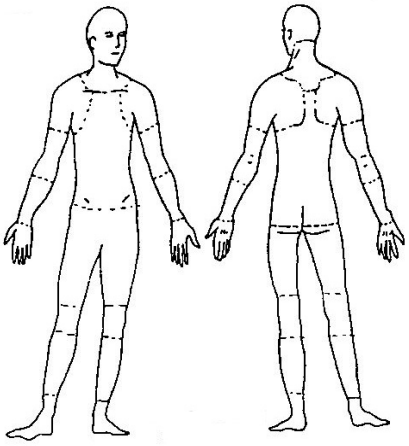
Supervisor Signature Date

Incident Investigation Report

Instructions: Complete this form as soon as possible after an incident that results in serious injury or illness. (Optional: Use to investigate a minor injury or near miss that *could have resulted in a serious injury or illness*.)

This is a report of a: ❑ Death ❑ Lost Time ❑ Dr. Visit Only ❑ First Aid Only ❑ Near Miss	
Date of incident:	This report is made by: ❑ Employee ❑ Supervisor ❑ Team ❑ Other_____

Step 1: Injured employee (complete this part for each injured employee)

Name:	Sex: ❑ Male ❑ Female	Age:
Department:	Job title at time of incident:	
Part of body affected: (shade all that apply) 	Nature of injury: (most serious one) ❑ Abrasion, scrapes ❑ Amputation ❑ Broken bone ❑ Bruise ❑ Burn (heat) ❑ Burn (chemical) ❑ Concussion (to the head) ❑ Crushing Injury ❑ Cut, laceration, puncture ❑ Hernia ❑ Illness ❑ Sprain, strain ❑ Damage to a body system: ❑ Other _____	This employee works: ❑ Regular full time ❑ Regular part time ❑ Seasonal ❑ Temporary Months with this employer Months doing this job:

Step 2: Describe the incident

Exact location of the incident:	Exact time:
What part of employee's workday? ❑ Entering or leaving work ❑ Doing normal work activities ❑ During meal period ❑ During break ❑ Working overtime ❑ Other_____	
Names of witnesses (if any):	

Number of attachments:	Written witness statements:	Photographs:	Maps / drawings:

What personal protective equipment was being used (if any)?

Describe, step-by-step the events that led up to the injury. Include names of any machines, parts, objects, tools, materials and other important details.

Description continued on attached sheets: ❑

Step 3: Why did the incident happen?

Unsafe workplace conditions: (Check all that apply)
- ❑ Inadequate guard
- ❑ Unguarded hazard
- ❑ Safety device is defective
- ❑ Tool or equipment defective
- ❑ Workstation layout is hazardous
- ❑ Unsafe lighting
- ❑ Unsafe ventilation
- ❑ Lack of needed personal protective equipment
- ❑ Lack of appropriate equipment / tools
- ❑ Unsafe clothing
- ❑ No training or insufficient training
- ❑ Other: _____

Unsafe acts by people: (Check all that apply)
- ❑ Operating without permission
- ❑ Operating at unsafe speed
- ❑ Servicing equipment that has power to it
- ❑ Making a safety device inoperative
- ❑ Using defective equipment
- ❑ Using equipment in an unapproved way
- ❑ Unsafe lifting
- ❑ Taking an unsafe position or posture
- ❑ Distraction, teasing, horseplay
- ❑ Failure to wear personal protective equipment
- ❑ Failure to use the available equipment / tools
- ❑ Other: _____

Why did the unsafe conditions exist?

Why did the unsafe acts occur?

Is there a reward (such as “the job can be done more quickly”, or “the product is less likely to be damaged”) that may have encouraged the unsafe conditions or acts? ❑ Yes ❑ No
If yes, describe:

Were the unsafe acts or conditions reported prior to the incident? ❑ Yes ❑ No

Have there been similar incidents or near misses prior to this one? ❑ Yes ❑ No

Step 4: How can future incidents be prevented?

What changes do you suggest to prevent this incident/near miss from happening again?

❑ Stop this activity ❑ Guard the hazard ❑ Train the employee(s) ❑ Train the supervisor(s)

❑ Redesign task steps ❑ Redesign work station ❑ Write a new policy/rule ❑ Enforce existing policy

❑ Routinely inspect for the hazard ❑ Personal Protective Equipment ❑ Other: _____

What should be (or has been) done to carry out the suggestion(s) checked above?

Description continued on attached sheets: ❑

Step 5: Who completed and reviewed this form? (Please Print)

Written by: Department:	Title: Date:
Names of investigation team members:	
Reviewed by:	Title: Date:

SECTION EIGHT

Wind Chart

Month: ____________________

Date	Wind Speed		Units	Initials	Notes
	AM	FM			
			MPH		
			MPH		
			MPH		
			MPH		
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ASBESTOS INFORMATION

Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma and cancer of the stomach and colon, therefore before beginning any renovation or demolition work, an asbestos survey must be completed for the work area. The survey must be performed by an accredited building inspector and the report must be shared with all personnel on site, including trade contractors. A copy of the report must remain onsite for reference.

All asbestos must be identified prior to the disturbance of any materials. Materials not sampled shall be assumed to be asbestos-containing until proven otherwise. If additional suspect materials are identified during the project, all work must stop immediately and the materials must be sampled for asbestos.

Only a licensed contractor will remove, repair or clean up asbestos-containing materials. However, if known or suspected ACM (asbestos containing material) is disturbed during the performance of work, the following procedure will be followed:

- Work in the area shall immediately stop,
- Other workers in the area of the disturbed or damaged material must be warned,
- The immediate supervisor must be contacted,
- The immediate area around the disturbed or damaged material must be barricaded, and
- The barricaded area must not be entered until proper bulk and/or air sampling has been completed and the area is deemed safe by Taylor Davis Landscape & Construction or the trade contractor.
-

Asbestos awareness training is required depending on the level of potential exposure.

DIG SAFE GUIDELINES

HOW TO PLACE A LOCATE REQUEST

There are two convenient ways to reach MISS DIG to place a locate request:

- Via the web at - Click Before You Dig Using e-Locate or through the RTE program, or
- Call Before You Dig, 8-1-1 is the nationwide toll-free number for locate services, or 1.800.482.7171 is staffed 24-hours per day, 365 days per year.

Location requests for excavation at a single address can be entered online with a valid email address. A confirmation email from DIG SAFE, along with general information pertaining to the excavation project, will be sent to the filer. Note: e-Locate is not valid until an email confirmation from DIG SAFE with a start date and time has been received.

The following information will be required from the DIG SAFE system to place a locate request:

- Name and phone number,
- The contractor or person doing the work,
- The geographical location (county, city, village or township) of the work area,
- The address where the work will be done,
- Nearest cross streets to the work site,
- The type of work being done; for example, installing a fence or building a deck,
- Information about the project area that identifies the boundaries for the utility representatives; for example, locate underground utility lines 100 feet from the north side of the house, locate underground utility lines in the entire yard, locate underground utility lines in the front yard, and
- When digging is scheduled to begin.

Hot Work Permit

General Information

Location	
Company Name	
Location of Work	
Floor/Level/Elevation	
Description of Work	
Special Precautions	

Employees Performing the Work

Name: _____ Signature: _____

_____ _____

_____ _____

_____ _____

Fire
Watch: _____ _____

Hot Work Activities

Hot work activities are any spark-producing activity that includes welding, burning or grinding.

Requirements

- Each foreman will complete a permit and have it authorized prior to performing any hot work activities,
- Foreman will instruct employees as to work being performed, precautions to be taken, how to use a fire extinguisher correctly, emergency procedures in case of fire and the duties of a fire watch,
- Work area must be clear of combustible and/or flammable material within a 35-foot radius. If these materials are immovable, then fire blankets or other fire-resistant material must protect them,
- A twenty-pound, or larger, dry-chemical fire extinguisher must be in the immediate vicinity of the work area, and
- Sparks and slag shall be confined to the work area. When working in elevated areas, protect areas below from sparks and slag.

Fire Watch Duties

- Continually check work area and all adjacent areas (above, below, around) to ensure they are free of fire during work activities, during breaks and for ½ hour after completed activities, and
- Must be trained in the proper use of a fire extinguisher and how to summon fire department or brigade.

Fire Extinguisher Use (P.A.S.S. method)

- Pull the pin on the extinguisher,
- Aim the extinguisher nozzle at the base of the fire,
- Squeeze the handle, and
- Sweep the base of the fire.

Approval

_____ _____

Project Manager/Safety Director Date

Critical Lift Checklist

		Go	No Go
Date			
Work Description			
Work Duration			
Associated Working Drawings			
Crane Model			
Location Pick			
Capacity of Crane at Pick Radius			
Weight of Pick			
Ground Conditions			
Overhead Wires Present			
Proximity to Traffic			
Outrigger Placement			
Outrigger Blocking as per Drawing			
Rigging in Good Working Order			
Delivery Location			
Wind Speed and Approximate Direction			
Weather			
Operator			
Foreman			
Supervisor			
Design Engineer			

Prepared By: _____ Date: _____

Approved By: _____ Date: _____

CRANE CHECKLIST

Taylor Davis Landscape & Construction does not allow any crane onsite without advanced notification from the contractor. Contractors must provide written notification two weeks in advance of crane operations onsite. This documentation should include the following:

- Expected date(s) of crane operations,
- Name of the crane company performing the work,
- Type of crane being used (anything being used to lift and place materials falls under the crane standard),
- Verification of operator certification, (include proof of operator's current card),
- Crane inspection must be current, (include proof of inspection documentation),
- Crane insurance must be current, (include a copy of current insurance certificate), and
- Crane path plan, (including overhead wires, access/egress roads, etc).

CRANE INSPECTION AND VERIFICATION PROCEDURES

The field manager must inspect the crane and verify documentation according to the following checklist:

Walk around the crane and inspect for proper set-up. This includes the following:

- Ground Conditions - This is the responsibility of the controlling contractor, not the crane company or the con- tractor! Ensure the ground is drained, graded, level and firm. Dunnage, matting, blanketing or blocking may be necessary to ensure ground conditions will support the crane operations.
- Outriggers are Fully Extended on Both Sides - Do not allow a crane operator to fly anything onsite unless the outriggers are fully extended! Insufficient outrigger extension is the number one cause of crane rollovers. Blocking a road or extending onto neighboring properties are not excuses for unsafe crane operations. With proper pre-planning, this can be resolved in advance of crane operations.
- Blocking or Matting is in Place - Outrigger bases should not extend over the edges of the blocks!
- Verify operator certification, including inspection of the operator's card for current qualification. Never allow an unqualified or expired operator to work onsite! Get a copy of the operator's card for documentation purposes.
- Verify the daily crane checklist has been completed by the operator.
- Verify the crane's inspection has been completed and IS on file (annual, bi-annual or quarterly inspection, depending on the type and use of the crane).
- Verify the crane's certificate of insurance is on file.
- Verify the contractor is using a qualified rigger (qualification is documented by training and experience).
- Verify rigging equipment being used is not defective or damaged and that it is the appropriate equipment for the lift and the load.
- Verify the load charts being used. The operator should know these and be using them