

OSHA COMPLIANCE

Safety & Health

FIELD SAFETY MANUAL



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SAFETY POLICY STATEMENT

IN ACCORDANCE WITH LOCAL LAWS, STATUTES, ORDINANCES, CODES AND REGULATIONS, AND CONFORMING TO THE BEST STANDARDS OF THIS COMPANY, WE WILL EFFECTIVELY MAINTAIN A SAFETY AND HEALTH COMPLIANCE PROGRAM AT EVERY EMPLOYMENT LOCATION.

SUCH A PROGRAM WILL HAVE THE BENEFITS OF REDUCING LOST TIME, PAIN AND SUFFERING AND WORKERS' COMPENSATION COSTS TO THE MINIMUM POSSIBLE LEVELS.

IT IS ONLY WITH THE WHOLEHEARTED COMMITMENT OF ALL WHO WORK AT, AND WITH **THOMAS JAMES HOMES** THAT THESE GOALS WILL BE ACHIEVED.

WE WILL CONTINUE TO STRIVE TOWARDS OUR ULTIMATE GOAL OF ZERO ACCIDENTS AND INJURIES AND WE RELY ON YOUR COOPERATIVE EFFORT IN ORDER TO SUCCEED.

Tommy Beadel
Co-Founder and CEO
January 2022



Introduction – Thomas James Homes

The Company has the responsibility, expertise and authority to manage the safety of its employees at all jobsites. The Occupational Safety and Health Act provides job safety and health protection for workers through the promotion of safe and healthful working conditions throughout the State of Arizona. It is the intent of this program to comply with the provisions of the Occupational Safety & Health Administration ("OSHA") laws, relevant ANSI Standards, Title 29, Code of Federal Regulations (CFR), Part 1926 and other applicable laws.

Every employer must establish, implement and maintain a Safety and Health Compliance Program (SHCP - Safety Program) and a copy should be maintained at each place of employment. The requirements for establishing, implementing and maintaining an effective Safety and Health Compliance Program are contained in the Construction Safety Act and the Williams-Steiger Occupational Safety and Health Act of 1970.

This SHCP program contains all of the elements of the essential framework required by OSHA for a Safety and Health Compliance Program in a high hazard industry. Although all injuries cannot be foreseen or prevented, to achieve maximum effectiveness the program must be maintained by the employer. Due to unique differences at each job-site, a site-specific injury and illness prevention codes have also been adopted. This "site-specific" maintenance of this safety program is contained and kept current in section 4 of this manual.

The format of this Safety and Health Compliance Program is designed to closely parallel the OSHA requirements of a high hazard industry, utilizing wherever possible the actual content of recommended text and layout provided by OSHA, supplemented by an extensive list of Appendices that hopefully enable the user to **effectively** comply with all of the most important requirements of the law.

Subsequent sections of this SHCP Manual deal with the other major OSHA mandated requirements for the Industry. The information contained in this manual is by no means exhaustive and from time to time will need to be supplemented with further information. The complete copy of OSHA standards for the Construction Industry is available at the corporate office and/or Courage.

Finally, this manual is only intended for use by the company's own employees. Each onsite sub-contractor has the responsibility to manage the safety of their own employees. This includes correcting or removing hazards and, in all cases, promptly notifying management and/or our designated representative of any hazards that have been or may be created to which our people could be exposed.



Responsibility & Authority – Thomas James Homes

The Safety and Health Compliance Program ("SHCP") administrators, **Ryan Huffman, Jon Tattersall, Stephen Tindle, and Douglas Woodward** have, with the support of **Courage Safety Systems, LLC ("The Agent")**, the authority and responsibility for implementing the provisions of this program for **Thomas James Homes ("The Company")**.

All Superintendents are responsible for implementing and maintaining the SHCP at their workplace and for answering questions from employees about the SHCP. A copy of this SHCP is available at head office and can be obtained upon request.

General Compliance

Management is responsible for ensuring that all safety and health policies and procedures are clearly communicated and understood by all company employees. Managers and supervisors are expected to enforce the rules fairly and uniformly. All company employees are responsible for using safe work practices, for following all directives, policies and procedures, and for assisting in maintaining a safe workplace.

Our system of ensuring that all company employees comply with the rules and maintain a safe work environment include:

1. Informing employees of the provisions of our SHCP Program (Appendix 3);
2. Evaluating the safety performance of all employees (Appendix 29);
3. Recognizing employees who perform safe and healthful work practices;
4. Providing training to employees whose safety performance is deficient;
5. Disciplining employees for failure to comply with safe and healthful work practices.

Our system for ensuring trade contractors are in compliance while on our jobsites includes:

1. A contract with each Trade Contractor stipulating that they effectively maintain written SHCP programs which meet or exceed all OSHA standards.
2. They provide all safety training necessary for all employees who work on our jobsites.
3. They supply all equipment necessary for their people to be able to do the job safely according to all applicable OSHA standards.
4. They supply a competent person who can answer all safety questions applicable to their trade and who performs all required safety inspections and employee discipline as necessary.



A. Compliance on a Multi-Employer Worksite

OSHA may cite the general contractor for violations committed by the trade contractors by asserting that the general contractor is the “controlling employer” of the construction site. The company’s construction contracts place the burden of safety compliance on each respective trade contractor because the company believes that each trade contractor has the expertise in their respective trades and knows best how to administer the safety of their own employees throughout the execution of their duties on the jobsite. An example of this is the choice the trade contractor makes when preparing fall protection guidelines for their employees. Each trade contractor has the choice between a conventional fall protection system or an alternative fall protection system if conventional methods are infeasible or are considered to create a greater hazard. In nearly all instances, the trade contractor can best manage its own trade. Moreover, each trade contractor has the specific experience and most current industry data relating to safe means and methods of operations for their trade.

Shortly after the Occupational Safety and Health Act went into effect in the early 1970’s, OSHA adopted a policy to address the unique situations of the multi-employer work-site. Additional fine-tuning of the policy occurred in the June 1992 revision to the OSHA Field Operations Manual (“FOM”). A new Field Inspection Reference Manual (“FIRM”) replaced the FOM in September 1994 as the guidance document used by OSHA field personnel to assist in the internal operations of OSHA. FIRM distinguishes between the employer, whose employees are exposed to the hazards (the “exposing” employer), and the employer who creates the hazards (the “creating” employer). Trade contractors who create hazards either as a normal part of their trade (e.g. acid-washing concrete to remove staining) or as a result of an accident or spill should notify the company so that we can thereafter take reasonable steps to address the condition.

It is our practice to select trade contractors who have agreed in the construction contract to maintain effective safety and health programs and policies that reasonably attempt to comply with OSHA standards.

In accordance with NAHB recommendations, the company routinely shares safety information with representatives of on-site trade contractors by posting copies of safety subjects in the trailer every ten-business days (“Tailgate Talks”).

Although our trades contracts require that each trade contractor maintains a safety data sheet (“SDS”) file relating to chemicals to which other employers’ employees might be exposed, in the unlikely event of an accident involving the use of these chemicals, we have access to a “Helpline” (1-800-MSDS-JOY). The Helpline maintains access to a library of 70,000 SDSs. While it remains the responsibility of each trade contractor to maintain appropriate SDSs, we provide this additional service as a last resort alternative to information if necessary.

Our trade contract requires that each trade contractor will provide a “competent person” on-site who is properly trained and qualified to OSHA standards with respect to that trade specialty, in order to make appropriate safety decisions during the particular contractor’s progress.

Each trade contractor is further expected to have a code of safe practices for their particular trade and all required posters (and translations of posters) for their employees to understand their rights and responsibilities.

B. Communication

Although many workplace accidents cannot be anticipated or avoided, we recognize that open, two-way communication between management and staff on health and safety issues is an important method to help reduce the instances of workplace injuries. The following system of communication is designed to facilitate a flow of information between management and staff relating to safety and health in a form that is understandable and consists of the following items:

1. Orientation for new employees which includes a discussion of safety and health policies and procedures conducted by the Human Resources Department.
2. Ongoing management review of the Safety Program.
3. Workplace safety and health training programs (see "Training & Instruction").
4. Regularly scheduled safety meetings through "Tailgate Talks" in accordance with OSHA.
5. Communication through Safety and Health posters located at worksites as appropriate.
6. A system for employees to anonymously inform management through Human Resources and/or the Safety Committee about workplace hazards.
7. A safety session periodically scheduled during other production meetings.
8. Formal safety meetings with all site superintendents periodically and additional safety sessions at all active jobsites as required.
9. Dissemination of safety related news, information and materials as appropriate.
10. Informal communication and discussion of accidents that have happened at similar jobsites including ways they could have been prevented or avoided.

An Introduction to:

COMPLIANCE ON A MULTI-EMPLOYER JOBSITE

As many builders have discovered, OSHA will often cite builders or general contractors for the OSHA violations of their subcontractors in addition to citing the sub. That is because OSHA considers the general contractor to be the “controlling employer” of the construction site. OSHA distinguishes between employers as follows:

THE “EXPOSING” EMPLOYER

On multi-employer worksites, both construction and non-construction, citations normally shall be issued to employers whose employees are exposed to hazards.

THE “CREATING” EMPLOYER

The employer who actually creates the hazard.

THE “CONTROLLING” EMPLOYER

The employer who is responsible, by contract or through actual practice, for safety and health conditions on the worksite, i.e., the employer who has the authority for ensuring that the hazardous condition is corrected.

THE “CORRECTING” EMPLOYER

The employer who has the responsibility for actually correcting the hazard.

In simplified language, the National Association of Home Builders (NAHB) considers that OSHA can, and often does, cite the builder (determined to be the “Controlling” employer) when there are violations of OSHA regulations by other employers on the jobsite.

C. Hazard Assessment

The Company retains Courage Safety Systems, an independent safety consulting firm, to assist with periodic inspections to identify and evaluate workplace hazards.

Periodic inspections are performed according to the following schedule:

1. At least bi-monthly at the site location; _____
mutually convenient times & dates
2. Within a reasonable time after a new, previously unidentified hazard is recognized as being introduced into the workplace;
3. Quarterly review of all reported occupational injuries and illnesses;
4. At the commencement of all new jobsite locations.

Periodic inspections consist of identification and evaluation of workplace hazards utilizing the Jobsite Inspection/Safety Survey (Appendix);

The Company contracts with their respective Trade Contractors to conduct safety inspections of their respective job-areas as necessary and required by OSHA.

Inspections by Trade Contractors are performed by a competent observer and include, but not limited to, daily inspections of trenches and excavations, scaffolding and where and whenever else workplace conditions warrant an inspection. Of particular importance is the need to perform inspections when there are changes in substances, processes, procedures or equipment and when changes in weather have occurred which significantly affect operations.

D. Accident/Exposure Investigations

Procedures for investigating workplace accidents and hazardous substance exposures include:

1. Visiting the accident scene as soon as practical;
2. Interviewing injured workers and witnesses;
3. Examining the workplace for factors associated with the accident/exposure;
4. Attempting to determine the cause of the accident/exposure;
5. Periodically meeting to develop corrective actions to attempt to prevent, or minimize the likelihood of, the accident/exposure from recurring; and
6. Recording the findings and corrective actions taken, if any, addressed directly to Courage Safety Systems, LLC and the Safety Administrator.

Use the Accident Investigation Report form for all accidents to company employees (Appendix).

For any **third-party** injury on the jobsite (e.g. where, say, a plumber has a plasterer's scaffold plank fall on them, or, a framer is exposed to a chemical used by another trade contractor) an accident investigation report is necessary. In the event that a trade contractor employee has an accident **wholly in the performance of his/her own job**, an accident report can be requested of that particular employer.

If a trade contractor's employee has an accident, it may also be necessary to use the "Notification of Hazardous Act or Condition" form (Appendix).

E. Hazards

i General

The Company will take reasonable steps to address unsafe or unhealthy work conditions, practices or procedures which should be corrected in a timely manner based on the severity of the hazards. Hazards should be corrected according to the following, as applicable;

1. When observed or discovered;
2. If a suspected hazard is identified, which cannot be immediately abated without endangering employee(s) and/or property, all affected work should temporarily cease until the condition can be addressed. Potentially exposed workers should be removed from the area except for those workers necessary to correct the condition. Workers necessary to correct the condition shall be provided with the necessary protection; and
3. All such actions taken, and dates they are completed, shall be documented on a report form, whenever reasonably possible and addressed to Courage Safety Systems, LLC and the Safety Administrator.

ii Hazardous Substances

A full description of the state hazard communication standard appears in section 2 of this manual.

F. Safety Training & Instruction

Company employees, including managers and supervisors specifically employed at each jobsite, should have training and instruction on general and job-specific safety and health practices applicable to that site. Reasonable steps to provide training and instruction, as applicable, should be periodically provided in accordance with the following guidelines:

1. When the Safety Program is first established at each new jobsite;
2. To new employees (through Human Resources Department), except for those in construction who are provided training through a OSHA approved construction industry occupational safety and health training program administered by Courage Safety Systems;
3. To all employees given new job assignments for which applicable training has not been previously provided;
4. Whenever new substances, processes, procedures or equipment are introduced to the workplace and represent a new hazard;
5. Whenever the employer is made aware of a new or previously unrecognized hazard;

Workplace safety and health training practices include the following:

1. Providing access to the company Safety Program, Emergency Action Plan and Fire Prevention Plan, and measures for reporting any unsafe conditions, work practices, and injuries.
2. Information about the use of appropriate clothing, including gloves, footwear and personal protective equipment, as necessary.
3. Information about chemical hazards to which employees could be exposed and other hazard communication program information.
4. Availability of toilet, hand-washing and drinking water facilities.
5. Provisions for medical services and first aid including emergency procedures.
6. Information about the Code of Safe Practices.
7. Information about Medical, First Aid and CPR procedures.

In addition, we provide general information to the company employees regarding some of the hazards present in the workplace, to the extent that such information was not covered in other training programs.

G. Recordkeeping & Reporting

i Recordkeeping

All high-hazard employers covered by the OSHA Act, except those who had no more than ten employees at any one time during the previous year, are required to keep OSHA records.

The records to be maintained assist DOSH personnel in making inspections and investigations, provide information employers can use to evaluate their own safety programs, give information to employees about conditions in their workplace, and provide data for the annual survey conducted by the state division of labor statistics and Research (DLSR) in cooperation with the U.S. Bureau of Labor Statistics.

The Building Industry is designated by OSHA to be a high hazard industry, and therefore requires certain specific recordkeeping and reporting standards. We have taken the following steps to implement these requirements into the Safety Program:

1. Records of hazard assessment inspections, including the person(s) conducting the inspection, the unsafe conditions and work practices that have been identified, and the action taken to correct the identified unsafe conditions and work practices (if any) are recorded on a hazard assessment and correction form; and
2. Documentation of safety and health training for each employee, including the employee's name or other identifier, training dates, type(s) of training, and training providers are recorded on an employee training and instruction form (Appendix 6). We also maintain records relating to employee training provided by a construction industry occupational safety and health training program approved by OSHA.

Inspection records and training documentation will be maintained for three years, except for training records of employees who have worked for less than one year which are provided to the employee upon termination of employment.

These records are kept on a calendar year basis and retained for five years.

The OSHA Form 300, Log and Summary of Occupational Injuries and Illnesses; Employers must post the final page of the OSHA Form 300 in a conspicuous place in the workplace during the months of February and March every year, to reflect the annual total number of company injuries and illnesses at that worksite.

Recordkeeping & Reporting

/Continued...

It is the employer's responsibility to record work-related injuries and illnesses, which include the following:

- Occupational deaths
- Lost work-day cases
- Occupational illnesses caused by exposure to environmental factors associated with employment, including acute and chronic illnesses or diseases.
- Occupational injuries that involve loss of consciousness, restricted work activity, transfer to another job, medical treatment other than first aid.

First aid cases which include one-time treatment, even if administered by a doctor, and subsequent observation for such injuries as minor scratches, cuts, burns and splinters **need not be recorded**. Treatment of occupational illness, including pesticide exposures, is not considered first aid and **must be recorded**.

In addition to maintaining records of occupational injuries and illnesses, the employer is required to allow employees, or their representatives, access to the employer's log of occupational injuries and illnesses, and to keep accurate records of employee exposure to harmful physical agents.

ii Reporting

All employers must report to ADOSH all workplace accidents as follows:

- All work-related fatalities within 8 hours following the incident.
- All work-related inpatient hospitalizations, all amputations, and all losses of an eye within 24 hours.

Note: Only fatalities occurring within 30 days of the work-related incident must be reported to ADOSH. Further, for an in-patient hospitalization, amputation or loss of an eye, these incidents must be reported to ADOSH only if they occur within 24 hours of the work-related incident.

You can report to ADOSH by:

- Calling ADOSH's free and confidential number at **(602) 542-5795** or toll-free at **(855) 268-5251**.
- Calling the ADOSH Phoenix Office at **(602) 542-5795** or Tucson Office at **(520) 628-5478** during normal business hours 8:00 a.m. to 5:00 p.m.
- Filling out the form provided (*Serious Event Reporting Form* – see red folder) and either FAXing it to **(602) 542-1614** OR attaching it to an email (comments@azdosh.gov; william.warren@azdosh.gov; larry.gast@azdosh.gov).

If you call outside of regular business hours, please leave a message and someone will return your call as soon as possible.

HOW TO HANDLE SITUATIONS INVOLVING IMMINENT DANGER

If you are an employee or employee representative and believe you or another employee are/is exposed to a condition that is **immediately** dangerous to life or health, you should first attempt to resolve the matter with the employer. If that is not possible, contact ADOSH at **(602) 542-5795** or toll-free at **(855) 268-5251** for guidance. After hours, please leave a message and someone will return your call as soon as possible.

Recording and Reporting Occupational Injuries and Illnesses

Updated November 1, 2018

Employers in states regulated by federal OSHA have been required to electronically submit certain records of occupational injuries and illnesses. The electronic submission requirements, along with the incorporation of an existing statutory prohibition on retaliating against employees for reporting work-related injuries or illnesses, were added to federal OSHA's recording and reporting regulations found in the Code of Federal Regulations, title 29, part 1904.

On April 30, 2018, federal OSHA posted a "trade release" requiring all affected employers to submit injury and illness data in the federal OSHA Injury Tracking Application (ITA) online portal, even if the employer was covered by a state plan that had not completed adoption of their own state rule: <https://www.osha.gov/news/newsreleases/trade/04302018>. Therefore, even though California had not yet adopted its own state rule, Cal/OSHA advised affected employers to comply with federal OSHA's directive to provide Form 300A data covering calendar year 2017 by July 1, 2018.

On July 27, 2018, federal OSHA posted a "trade release" that it proposes to amend its recordkeeping regulation by rescinding the requirement for establishments with 250 or more employees to electronically submit information from OSHA Forms 300 (Log of Work-Related Injuries and Illnesses) and 301 (Injury and Illness Incident Report). These establishments will continue to be required to submit information from their Form 300A (Summary of Work-Related Injuries and Illnesses) covering the previous calendar year. For additional information and links, go to federal OSHA's trade release: <https://www.osha.gov/news/newsreleases/trade/07272018>.

On October 18, 2018, Cal/OSHA issued an amended notice of proposed emergency action to amend sections 14300.35 and 14300.41 of title 8 of the California Code of Regulations. The purpose of the amendments is to conform California's recordkeeping requirements to the federal OSHA program. The proposed regulatory language and Finding of Emergency are posted at <https://www.dir.ca.gov/dosh/doshreg/Recording-and-Reporting/>

On November 1, 2018, the Office of Administrative Law approved the emergency action. This means that the employers in California described below are now required to submit Form 300A data covering calendar year 2017 by December 31, 2018. These employers should follow the instructions posted at federal OSHA's ITA website:

- All employers with 250 or more employees, unless specifically exempted by section 14300.2 of title 8 of the California Code of Regulations
- Employers with 20 to 249 employees in the specific industries listed in Appendix H of the emergency regulations.

Hazard Control & Communication – Globally Harmonized System (GHS)

Arizona Code of Regulations requires the following explanation of the methods used to identify, analyze, plan and control new and existing hazardous conditions.

The Globally Harmonized System (GHS) is A SYSTEM. Elements of this system will be adopted by OSHA, to classify and communicate hazards of chemicals based on a common set of criteria. GHS is a harmonized system for the classification and labeling of chemicals covering health, physical and environmental hazards. It provides a basis for the harmonization of regulations related to the handling of chemical materials at a global level.

Employee Right-To-Understand

The standard that gave workers the right to know, now gives them the right to understand. OSHA standards have established an employee's "Right-to-Understand" about hazardous conditions and/or materials that they may be exposed to during the course of their employment and how to safely protect themselves.

Hazard Identification

A formal assessment survey and evaluation should be regularly conducted and reported to the Safety Committee.

SDS's

Hazardous conditions must be identified and documented, hazardous materials inventoried and properly communicated by use of Safety Data Sheets (SDS – formerly MSDS). Jobsite safety inspections that include all hazardous materials and equipment should be made at the start of each job and every month thereafter. Label all hazardous materials.

Fire Hazards

All combustible materials must be properly stored and labeled, and a visual inspection of all portable fire extinguishers must be included in the inspection. If a hazard is found that cannot be immediately abated, secure the job site by appropriately placed signs and tape off the area in order to prevent possible accidents and/or injury.

Hazard Analysis

Using the "Hazards Analysis" guide, evaluate the extent of the danger and properly communicate it both to the Safety Administrator and the Safety Committee.

Hazard Control

Hazardous materials must be labeled and stored in a clearly marked area. Hazardous site conditions must be identified, secured and effectively communicated. Hazardous equipment must

be labeled and withdrawn from service. Hazardous work practices must be adjusted to ensure that a job can be safely performed.

It is better to avoid hazards and/or eliminate them rather than try to “work around them”.

The Hazard Control & Communication Program should be implemented and maintained at the workplace. Any chemical which is a physical hazard, or a health hazard must be stored in a container appropriately labeled or marked with the identity of the hazardous chemical(s), whatever warnings that are necessary and the name and address of the responsible party.

A temporary container does not need to be marked if it is constantly with the employee using it until the work is finished. All labels must be legible, in English, and clearly display physical hazard warnings and health risks.

Health Hazards Classification

Acute Toxicity Contact by skin or ingestion produces adverse effects within 24 hrs , or 4 hrs by inhalation Can be one or more doses	Skin Corrosion Irreversible damage to skin after up to 4 hrs of contact Skin Irritation Reversible damage to skin after up to 4 hrs of contact	Serious Eye Damage Produces irreversible eye tissue damage in the eye within 21 days of contact Eye Irritation Production of reversible changes in the eye within 21 days of contact
Respiratory Sensitizer Induces hypersensitivity after inhalation Skin Sensitizer Induces allergic reaction after contact	Carcinogen Induces or increases cancer incidence in the organism	Mutagen Affects the cells genetic material producing abnormal development of an organism
Reproductive Toxicity Adverse effects on sexual function and fertility in adult males and females and even offspring development	Specific Target Organ Toxicity – Single Exposure One exposure damages or affects target organs to which the material is more attracted or compatible to.	Specific Target Organ Toxicity – Repeated Exposure Same as prior category but requiring multiple doses or exposures
Aspiration Hazard Damage caused by entry of a liquid or solid directly through the oral or nasal cavity, or into the lower respiratory system		

Physical Hazards Classification

Flammable Gases Gas that burns at a given temperature and pressure	Flammable Aerosols Contained under pressure, discharges particles in suspension, or as a foam, paste, powder, liquid or gas	Flammable Liquids Any liquid with a flash point of 93 degrees C (199.4 F) or less.	Flammable Solids Easily combustible through friction
Gases Under Pressure Contained in a receptacle at a given temperature and pressure	Oxidizing Gases Cause or contribute combustion by yielding oxygen	Oxidizing Liquids Cause or contribute combustion by yielding oxygen	Oxidizing Solids Cause or contribute combustion by yielding oxygen
Explosives Can spontaneously generate gases, and temperature capable of destruction	Self-Reactive Thermally unstable, can decompose exothermically even without air	Pyrophoric Liquids Liable to ignite within five minutes after contact with air	Pyrophoric Solids Liable to ignite within five minutes after contact with air
Spontaneous Heating Liable to self-heat without contribution from external energy	Emits Flammable Gas Upon contact with water ignites spontaneously generating flammable gases	Organic Peroxides tend to rapid thermally unstable decomposition	Corrosive To Metals Contact with metals will harm or destroy them

Hazard Warnings

Signs should be posted and/or labels attached for the following reasons:

- Hot hazards
- Chemical hazards
- Authorized Areas & Controlled Access Zones
- Whenever/wherever Personal Protective Equipment is needed.
- Other Physical and Health Hazards.

The purpose of the Hazard Communication Program is to ensure that the hazards of all chemicals produced or imported are evaluate and that information concerning their hazards is transmitted to employers and employees.

One of the key components of the program is the Safety Data Sheet (SDS).

SDS should be obtained for every hazardous chemical in the workplace. The SDS Inventory Form can be used to check that this has been done.

SDS Accessibility

SDS should be accessible to all concerned employers and employees. The SDS file should be clearly marked and always available in case of an emergency. The accessibility of the SDS can be either physically at the workplace, available by fax or electronically. Fax numbers or electronic addresses should be available in the event they are stored offsite.

For employees who work offsite or who travel away from their primary workplace, SDS should be store at the primary workplace and can immediately be obtained in case of an emergency.

Subcontractors who use or store hazardous materials at the jobsite are encouraged to file SDS's at the site trailer.

SDS Information & Categories

SDS must be complete with accurate information for each of the following categories:

- Section 1: Identification
- Section 2: Hazard(s) Identification
- Section 3: Composition/Information on Ingredients
- Section 4: First-Aid Measures
- Section 5: Fire-Fighting Measures
- Section 6: Accidental Release Measures
- Section 7: Handling and Storage
- Section 8: Exposure Controls/Personal Protection
- Section 9: Physical and Chemical Properties
- Section 10: Stability and Reactivity
- Section 11: Toxicological Information
- Section 12: Ecological Information
- Section 13: Disposal Considerations
- Section 14: Transport Information
- Section 15: Regulatory Information
- Section 16: Other Information – date of preparation or last revision

Written Hazard Communication Program

These pages represent the Company's "Written Hazard Communication Program" ("HCP") as required by OSHA's Hazard Communication Standard. The objectives of this standard are:

- To ensure that the hazards of chemical substances used by the company are identified and appropriate safeguards instituted.
- To ensure that employees are trained in the hazards of the chemical substances with which they work.
- HCP shall include the methods employers will use to inform other employers using the same work area of the hazardous substances.

Incoming Chemicals

Any container of chemical coming into the workplace with which neither appears on the Safety Data Sheet (SDS) Inventory Form or is missing its label or other form of identification should be reported to the subcontractor foreman, the site superintendent or safety committee member.

These materials will not be released for use until the supplier has been contracted for the appropriate SDS and labels.

Any chemical listed as hazardous on the SDS can be cross referenced on the following lists:

- OSHA Subpart Z (Toxic and Hazardous Substances)
- Sect. 37245 (Threshold Limit Values of Chemical Substances and Physical Agents in the Workplace).
- Sect. 335 (Listing of Extremely Hazardous Chemicals)
- Cercla 302.4

Labeling & Tagging

Label Components consist of the following:

- Product Identifier
- Supplier Identifier
- Chemical Identity
- Hazard Pictograms
- Signal Words
- Hazard Statements
- Precautionary Information (mandatory)

Pictograms

The new GHS program includes universal Pictograms. The pictograms display health, physical, and environmental hazard information. Pictograms feature a white background with a red border instead of a solid orange background.

For transport, pictograms will have the background and symbol colors currently used. For other sectors, pictograms will have a black symbol on a white background with a red diamond frame. A black frame may be used for shipments within one country. OSHA will maintain the red border. The transport pictogram has precedence over the GHS pictogram if the same hazard is present.

GHS Pictograms

EXPLODING BOMB Explosives; Self Reactive; Organic Peroxides 	SKULL AND CROSSBONES Acute toxicity (severe) 	FLAME Flammables; Pyrophorics; Self-Heating; Emits Flammable Gas; Self Reactive; Organic Peroxides 
GAS CYLINDER Gases under pressure 	HEALTH HAZARD Carcinogen; Mutagenicity; Reproductive Toxicity; Respiratory Sensitizer; Target Organ Toxicity; Aspiration Toxicity 	FLAME OVER CIRCLE Oxidizers 
CORROSION Corrosives 	EXCLAMATION MARK Irritant; Skin Sensitizer; Acute Toxicity (harmful); Narcotic effects; Respiratory Tract Irritant; Hazardous to Ozone Layer 	ENVIRONMENTAL Aquatic Toxicity (OSHA did not propose this pictogram) 

Transport Pictograms

 Explosives (Class 1)	 Flammables (Class 3, 4)
 Gases (Class 2)	 Oxidizers (Class 5)
 Toxic (Class 6)	 Corrosives (Class 8)

Signal Words

- **Danger:** most harmful to person, because of toxicity or exposure, more severe or persistent effects
- **Warning:** less harmful to person, lower levels of exposure or toxicity or temporary harmful effects



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Storage

Hazardous materials should be stored in accordance with the prescribed instruction.

The storage area will be identified as such and materials will be grouped for easy recognition.

Training

All employees will be provided with information and training on hazardous and toxic substance utilized in their workplace at the time of their initial assignment, whenever a new hazardous material or toxic substance is introduced to the workplace or whenever new/revised information is received concerning a hazardous or toxic substance. Refresher employee training sessions will be conducted annually to review physical and health hazards, safety precautions and emergency procedures for hazardous or toxic substance with which they work.

Employee Rights

Employees have a “right-to-understand” about Hazardous Materials and Toxic Substances that are used in the workplace.

Information on safety and operating procedures in the work areas where the hazardous chemicals are present.

Methods employees can use to protect themselves such as work practices, personal hygiene practices and the use of personal protective equipment when necessary.

The location and availability of this Hazard Communication Manual together with all applicable safety data sheets.

* Written, printed or graphic information displayed on or affixed to the container of a toxic or hazardous substance. Labels are designed to inform employees concerning the hazards of various chemicals. It is therefore important that no hazardous chemicals are put in an improperly labeled container or in a container without a label.

Recordkeeping

The company will maintain training records on each employee. The training record forms can be found in the appendix.

All SDS are maintained for thirty (30) years. Documentation of each employee’s training is maintained for three (3) years after the employee has left the company.

Trade Contractors

All outside trade contractors doing work for the company at any of its facilities or job sites will be required through the Master Subcontract Agreement, to provide SDS, hazardous materials training and adequate hazard control and communications procedures for their employees. It is the responsibility of the trade contractor, as the controlling employer, to properly train and instruct their employees in all aspects of hazardous materials usage and on toxic substance to which their employees may become exposed at the workplace.

If the trade contractor is using chemicals, hazardous materials or toxic substances to which other workers at the workplace may be dangerously exposed, the trade contractor must inform the site superintendent of these possible dangers. Trade contractor will provide the site superintendent with the appropriate SDS which can be kept on site for other workers indirectly exposed to these hazards in the performance of their duties.

How to Read & Understand a Safety Data Sheet (SDS)

The Safety Data Sheet (SDS) is the primary document in hazard communication. The information contained in the SDS enables the employer to develop an active program of worker protection measures, including training specific to the workplace. Employers and workers use them as an information source about hazards of a chemical substance or mixture and to obtain advice on safety precautions. SDS information can be used by those involved in the transport of dangerous goods and emergency responders.

OSHA requires the SDS be produced for all chemicals (substances and mixtures) which meet the harmonized criteria for physical, health or environmental hazards under the GHS and for all mixtures which contain substances that meet the criteria for Carcinogens, Toxic to reproduction or TOST in concentrations exceeding the cut-off limits specified by the criteria for mixtures.

The SDS should include information on these topics:

Section 1: Identification

This section identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier.

Section 2: Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards.

Section 3: Composition/Information on Ingredients

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed.

Section 4: First-Aid Measures

This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.

Section 5: Fire-Fighting Measures

This section provides recommendations for fighting a fire caused by the chemical.

Section 6: Accidental Release Measures

This section provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard.

Section 7: Handling and Storage

This section provides guidance on the safe handling practices and conditions for safe storage of chemicals.

Section 8: Exposure Controls/Personal Protection

This section indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure.

Section 9: Physical and Chemical Properties

This section identifies physical and chemical properties associated with the substance or mixture.

Section 10: Stability and Reactivity

This section describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into three parts: reactivity, chemical stability, and other.

Section 11: Toxicological Information

This section identifies toxicological and health effects information or indicates that such data is not available.

Section 12: Ecological Information (non-mandatory)

This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.

Section 13: Disposal Considerations (non-mandatory)

This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS.

Section 14: Transport Information (non-mandatory)

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea.

Section 15: Regulatory Information (non-mandatory)

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.

Section 16: Other Information

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

Employer Responsibilities

Employers must ensure that the SDSs are readily accessible to employees for all hazardous chemicals in their workplace. This may be done in many ways. For example, employers may keep the SDSs in a binder or on computers as long as the employees have immediate access to the information without leaving their work area when needed and a back-up is available for rapid access to the SDS in the case of a power outage or other emergency. Furthermore, employers may want to designate a person(s) responsible for obtaining and maintaining the SDSs. If the employer does not have an SDS, the employer or designated person(s) should contact the manufacturer to obtain one.

Emergency Preparedness Plans

OSHA requires employers to have a written emergency action plan. At a minimum the plan must have the following:

- Effectively responding to employees in imminent danger
- Emergency evacuations escape routes and procedures
- Procedures for employees who must remain to operate critical operations before they can evacuate the facility
- Procedures to account for all staff after evacuation
- Procedures for employees who are involved in rescue and medical efforts during and after the emergency
- Means of reporting fires, spills and other emergencies
- Alarm System (Shouting out loud around the facility)
- Names/job titles of staff who can be contacted about the emergency action plan (see appendix 4 for details)

Fire Prevention Plan

OSHA requires a fire prevention plan that must address:

- Potential fire hazards and proper procedures for handling and storing them, potential ignition sources and procedures for controlling them and the type of fire protection equipment that can control such a fire.
- Names or job titles of persons of those responsible for maintaining installed fire prevention equipment.
- Names or job titles of those responsible for the control of accumulation of flammable or combustible waste.
- Housekeeping: Control accumulation of flammable and combustible waste materials and residues so they do not contribute to a fire emergency.
- Training: The employer must apprise employees of the fire hazards of the materials and processes to which they are exposed and review the plan with each employee.
- Maintenance: All equipment must be maintained to prevent accidental ignition of combustible materials.
- Hot Work Procedures



OSHA[®] FactSheet

Protecting Workers from the Effects of Heat

At times, workers may be required to work in hot environments for long periods. When the human body's unable to maintain a normal temperature, heat-related illnesses can occur and may result in death. This fact sheet provides information to employers on measures they should take to prevent worker illnesses and death caused by heat stress.

Factors that May Cause Heat-related Illness

- High temperature and humidity
- Low fluid consumption
- Direct sun exposure (with no shade) or extreme heat
- Limited air movement (no breeze or wind)
- Physical exertion
- Use of bulky protective clothing and equipment
- Poor physical condition or ongoing health problems
- Some medications
- Pregnancy
- Lack of previous exposure to hot workplaces
- Previous heat-related illness

Health Problems Caused by Hot Work Environments

Heat Stroke is the most serious heat-related health problem. Heat stroke occurs when the body's temperature regulating system fails and body temperature rises to critical levels (greater than 104°F). ***This is a medical emergency that may result in death!*** The signs of heat stroke are confusion, loss of consciousness and seizures. Workers experiencing heat stroke have a very high body temperature and may stop sweating. If a worker shows signs of possible heat stroke, ***get medical help immediately***, and call 911. Until medical help arrives, move the worker to a shady, cool area and remove as much clothing as possible. Wet the worker with cool water and circulate the air to speed cooling. Place cold wet cloths, wet towels or ice all over the body or soak the worker's clothing with cold water.

Heat Exhaustion is the next most serious heat-related health problem. The signs and symptoms of heat exhaustion are headache, nausea, dizziness, weakness, irritability, confusion, thirst, heavy sweating and a body temperature greater than 100.4°F. Workers with heat exhaustion should be removed from the hot area and given liquids to drink. Remove unnecessary clothing including shoes and socks.

Cool the worker with cold compresses to the head, neck, and face or have the worker wash his or her head, face and neck with cold water. Encourage frequent sips of cool water. Workers with signs or symptoms of heat exhaustion should be taken to a clinic or emergency room for medical evaluation and treatment. Make sure that someone stays with the worker until help arrives. If symptoms worsen, call 911 and get help immediately.

Heat Cramps are muscle pains usually caused by physical labor in a hot work environment. Heat cramps are caused by the loss of body salts and fluid during sweating. Workers with heat cramps should replace fluid loss by drinking water and/or carbohydrate-electrolyte replacement liquids (e.g., sports drinks) every 15 to 20 minutes.

Heat Rash is the most common problem in hot work environments. Heat rash is caused by sweating and looks like a red cluster of pimples or small blisters. Heat rash usually appears on the neck, upper chest, in the groin, under the breasts and in elbow creases. The best treatment for heat rash is to provide a cooler, less humid work environment. The rash area should be kept dry. Powder may be applied to increase comfort. Ointments and creams should not be used on a heat rash. Anything that makes the skin warm or moist may make the rash worse.

Engineering Controls to Prevent Heat-related Health Effects

The best way to prevent heat illness is to make the work environment cooler. In outdoor situations, this may be done by scheduling activities during the cooler times of the day. However, very early starting times may result in increased fatigue. Also, humidity tends to be higher in the early morning hours. Provide air conditioned or shaded areas close to the work area and allow frequent rest breaks.

Indoor workplaces may be cooled by using air conditioning or increased ventilation, assuming that cooler air is available from the outside. Other methods to reduce indoor temperature include: providing reflec-

tive shields to redirect radiant heat, insulating hot surfaces, and decreasing water vapor pressure, e.g., by sealing steam leaks and keeping floors dry. The use of fans to increase the air speed over the worker will improve heat exchange between the skin surface and the air, unless the air temperature is higher than the skin temperature. However, increasing air speeds above 300 ft. per min. may actually have a warming effect. Industrial hygiene personnel can assess the degree of heat stress caused by the work environment and make recommendations for reducing heat exposure.

Work Practices to Prevent Heat-related Health Effects

- Train workers and supervisors about the hazards leading to heat stress and ways to prevent them.
- Allow workers to get used to hot environments by gradually increasing exposure over a 5-day work period. Begin with 50% of the normal workload and time spent in the hot environment and then gradually build up to 100% by the fifth day. New workers and those returning from an absence of two weeks or more should have a 5-day adjustment period.
- Provide workers with plenty of cool water in convenient, visible locations close to the work area. Water should have a palatable (pleasant and odor-free) taste and water temperature should be 50–60°F if possible.
- Remind workers to frequently drink small amounts of water before they become thirsty to maintain good hydration. Simply telling them to drink plenty of fluids is not sufficient. During moderate activity, in moderately hot conditions, at least one pint of water per hour is needed. Workers should drink about 6 ounces or a medium-sized glass-full every 15 minutes. Instruct workers that urine should be

clear or lightly colored.

- Be aware that it is harmful to drink extreme amounts of water. Workers should generally not drink more than a total of 12 quarts of fluid in 24 hours.
- Reduce the physical demands of the job, such as excessive lifting, climbing, or digging with heavy objects. Use mechanical devices or assign extra workers.
- Monitor weather reports daily and reschedule jobs with high heat exposure to cooler times of the day. When possible, routine maintenance and repair projects should be scheduled for the cooler seasons of the year.
- Schedule frequent rest periods with water breaks in shaded or air-conditioned recovery areas.
- Workers are at an increased risk of heat stress from personal protective equipment (PPE), especially from wearing semi-permeable (penetrable) or impermeable clothing (such as Tyvek or rubber), when the outside temperature exceeds 70°F, or while working at high energy levels. These types of clothing materials trap heat close to a worker's body. Workers should be monitored by establishing a routine to periodically check them for signs and symptoms of overexposure.

Specialized Personal Protective Equipment to Reduce Heat Exposure

- For more information on this, and other health-related issues affecting workers, visit OSHA's website at www.osha.gov.

Additional Information

- For more information on this and other health-related issues affecting workers, visit the following OSHA web pages:
www.osha.gov/SLTC/heatstress/recognition.html
www.osha.gov/dts/osta/otm/otm_iii/otm_iii_4.html

This document is advisory in nature and informational in content. It is not a standard or regulation, and it neither creates new legal obligations nor alters existing obligations created by OSHA standards or the Occupational Safety and Health Act. Pursuant to the OSH Act, employers must comply with safety and health standards and regulations issued and enforced either by OSHA or by an OSHA-approved State Plan. In addition, the Act's General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm.

For more complete information:



U.S. Department of Labor

www.osha.gov

(800) 321-OSHA



Protecting Workers from Heat Stress

Heat Illness

Exposure to heat can cause illness and death. The most serious heat illness is heat stroke. Other heat illnesses, such as heat exhaustion, heat cramps and heat rash, should also be avoided.

There are precautions your employer should take any time temperatures are high and the job involves physical work.

Risk Factors for Heat Illness

- High temperature and humidity, direct sun exposure, no breeze or wind
- Low liquid intake
- Heavy physical labor
- Waterproof clothing
- No recent exposure to hot workplaces

Symptoms of Heat Exhaustion

- Headache, dizziness, or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea, or vomiting

Symptoms of Heat Stroke

- May be confused, unable to think clearly, pass out, collapse, or have seizures (fits)
- May stop sweating

To Prevent Heat Illness, Your Employer Should

- Provide training about the hazards leading to heat stress and how to prevent them.
- Provide a lot of cool water to workers close to the work area. At least one pint of water per hour is needed.



For more information:

 **Occupational
Safety and Health
Administration**
U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

OSHA 3154-09-11R

OSHA[®] QUICK CARD[™]

- Schedule frequent rest periods with water breaks in shaded or air-conditioned areas.
- Routinely check workers who are at risk of heat stress due to protective clothing and high temperature.
- Consider protective clothing that provides cooling.



How You Can Protect Yourself and Others

- Know signs/symptoms of heat illnesses; monitor yourself; use a buddy system.
- Block out direct sun and other heat sources.
- Drink plenty of fluids. Drink often and BEFORE you are thirsty. Drink water every 15 minutes.
- Avoid beverages containing alcohol or caffeine.
- Wear lightweight, light colored, loose-fitting clothes.



What to Do When a Worker is Ill from the Heat

- Call a supervisor for help. If the supervisor is not available, call 911.
- Have someone stay with the worker until help arrives.
- Move the worker to a cooler/shaded area.
- Remove outer clothing.
- Fan and mist the worker with water; apply ice (ice bags or ice towels).
- Provide cool drinking water, if able to drink.

IF THE WORKER IS NOT ALERT or seems confused, this may be a heat stroke. CALL 911 IMMEDIATELY and apply ice as soon as possible.

If you have any questions or concerns, call OSHA at 1-800-321-OSHA (6742).

For more information:

OSHA[®] Occupational
Safety and Health
Administration
U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

OSHA[®] FactSheet

Fall Protection in Residential Construction

The United States Department of Labor's Occupational Safety and Health Administration (OSHA) has issued a directive rescinding the Interim Fall Protection Compliance Guidelines for Residential Construction (STD 03-00-001).

Before issuance of this new directive, STD 03-00-001 allowed employers engaged in certain residential construction activities to use specified alternative methods of fall protection (e.g., slide guards or safety monitor systems) rather than the conventional fall protection (guardrails, safety nets, or personal fall arrest systems) required by the residential construction fall protection standard (29 CFR 1926.501(b)(13)). Employers could use the alternative measures described in STD 03-00-001 without first proving that the use of conventional fall protection was infeasible or created a greater hazard and without a written fall protection plan.

With the issuance of the new directive, all residential construction employers must comply with 29 CFR 1926.501(b)(13).

- Residential construction employers generally must ensure that employees working six feet or more above lower levels use guardrails, safety nets, or personal fall arrest systems. A personal fall arrest system may consist of a full body harness, a deceleration device, a lanyard, and an anchor point. (See the definition of "personal fall arrest system" in 29 CFR 1926.500.)
- Other fall protection measures may be used to the extent allowed under other provisions of 29 CFR 1926.501(b) addressing specific types of work. For example, 1926.501(b)(10) permits the use of warning lines and safety monitoring systems during the performance of roofing work on low-sloped roofs.
- OSHA allows the use of an effective fall restraint system in lieu of a personal fall arrest system. To be effective, a fall restraint system must be rigged to prevent a worker from reaching a fall hazard and falling over

the edge. A fall restraint system may consist of a full body harness or body belt that is connected to an anchor point at the center of a roof by a lanyard of a length that will not allow a worker to physically reach the edge of the roof.

- If the employer can demonstrate that use of conventional fall protection methods is infeasible or creates a greater hazard, it must ensure that a qualified person:
 - Creates a written, site-specific fall protection plan in compliance with 29 CFR 1926.502(k); *and*
 - Documents, in that plan, the reasons why conventional fall protection systems are infeasible or why their use would create a greater hazard.

The new directive interprets "residential construction" as construction work that satisfies both of the following elements:

- The end-use of the structure being built must be as a home, i.e., a dwelling.
- The structure being built must be constructed using traditional wood frame construction materials and methods. The limited use of structural steel in a predominantly wood-framed home, such as a steel I-beam to help support wood framing, does not disqualify a structure from being considered residential construction.
 - Traditional wood frame construction materials and methods will be characterized by:
 - *Framing materials:* Wood (or equivalent cold-formed sheet metal stud) framing, not steel or concrete; wooden floor joists and roof structures.
 - *Exterior wall structure:* Wood (or equivalent cold-formed sheet metal stud) framing or masonry brick or block.
 - *Methods:* Traditional wood frame construction techniques.

OSHA FactSheet

Preventing Falls

Falls and falling objects can result from unstable working surfaces, ladders that are not safely positioned, and misuse of fall protection. Workers are also subject to falls or to the dangers of falling objects if sides and edges, floor holes, and wall openings are not protected. Any time a worker is at a height of six feet or more (construction industry) or four feet or more (general industry), the worker must be protected.

Fall Protection

Fall protection must be provided for each employee on a walking/working surface with an unprotected side or edge at the height required by the OSHA standard applicable to their work environment. Management is required to:

- Develop, implement and commit to a fall protection program
- Provide training on the fall protection program
- Evaluate the program on a regular basis to insure the program's effectiveness and determine whether it needs to be changed or updated

Employers are required to assess the workplace to determine if the walking/working surfaces on which employees are to work have the strength and structural integrity to safely support workers. Once employers have determined that the surface is safe for employees to work on, the employer must select one of the options listed for the work operation if a fall hazard is present.

- Where protection is required, select fall protection systems appropriate for given situations.
- Use proper construction and installation of safety systems.
- Supervise employees properly.
- Train workers in the proper selection, use, and maintenance of fall protection systems.

Unprotected Sides, Wall Openings, and Floor Holes

Almost all sites have unprotected sides and edges, wall openings, or floor holes at some point during construction. If these sides and openings are not protected at your site, injuries from falls or falling objects may result, ranging from sprains and concussions to death.

- Use at least one of the following whenever

employees are exposed to a fall of 6 feet or more [see comment above] above a lower level:

- Guardrail Systems
- Safety Net Systems
- Fall Arrest Systems
- Cover or guard floor holes as soon as they are created.
- Guard or cover any openings or holes immediately.
- Construct all floor hole covers so they will effectively support two times the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
- In general, it is better to use fall prevention systems, such as guardrails, than fall protection systems, such as safety nets or fall arrest devices.

Ladders

You risk falling if portable ladders are not safely positioned each time they are used. While you are on a ladder, it may move and slip from its supports. You can also lose your balance while getting on or off an unsteady ladder. Falls from ladders can cause injuries ranging from sprains to death.

- Position portable ladders so the side rails extend at least 3 feet above the landing
- Secure side rails at the top to a rigid support and use a grab device when 3 foot extension is not possible.
- Make sure that the weight on the ladder will not cause it to slip off its support.
- Before each use, inspect ladders for cracked, broken, or defective parts.
- Do not apply more weight on the ladder than it is designed to support.
- Use only ladders that comply with OSHA standards.

Reducing Falls during Residential Construction: Floor Joist Installation and Decking

Installing floor joists and decking can be a dangerous task if precautions are not taken to prevent falls. It is important to protect workers engaged in “leading edge” work to ensure that they do not fall through openings to lower levels. This fact sheet highlights some of the risks associated with installing floor joists and decking, and details various methods that employers can use to protect workers performing these tasks. The fall protection methods in this fact sheet may not be suitable in all situations. Employers are responsible for ensuring compliance with applicable OSHA requirements.

Risks While Installing Floor Joists and Decking

Floor joists are typically set directly over foundation walls or framed walls. If workers stand on the joists or walls without fall protection, they can fall through to lower levels. Fall hazards are likely to be present if the structure being built has multiple stories. The use of effective fall protection can prevent a serious fall.

The employer must provide a training program for each worker who might be exposed to fall hazards. The program must enable each worker to recognize fall hazards and train each worker in the procedures to follow to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take steps to reduce the risk of falls.

Reducing Risks:

Planning

Planning for the use of fall protection equipment can help employers protect workers from falls. Before beginning the job, identify fall protection needs. Once appropriate fall protection systems have been identified, have those systems in place before the workers report to the job.

Using the Right Equipment

Employers generally must ensure that workers use fall protection meeting OSHA requirements whenever they work 6 feet or more above a lower level (29 CFR 1926.501(b)(13)). There are guardrail systems and personal fall arrest systems available that can provide workers the flexibility they need during floor joist and decking installation. Some systems are more efficient than others because, in many cases, the employer can use the same system for both tasks. Employers may also choose to use



scaffolds or ladders for floor joist installation and decking.

Note: OSHA's fall protection requirements for residential construction work performed on scaffolds and ladders are specified in Subpart L and Subpart X, respectively, not in 29 CFR 1926.501(b)(13).

Scaffolds

Scaffolds, erected on the inside or outside of the house, can be used while workers install floor joists. Engineered bracket scaffold systems and job-built scaffold systems can provide workers with stable work platforms when they install floor joists and possibly while they attach some of the decking. These types of scaffolds can be adjusted to a comfortable work height. Always follow the manufacturer's instructions or consult a qualified person to ensure that scaffold systems are used safely. Employers must ensure that employees on scaffold systems 10 feet or more above a lower level are protected from falls.

Mobile scaffolds can be an effective method for lifting workers up while providing protection from falls. For work on the first floor of a residence,

mobile scaffolds can be placed on the cured concrete basement floor. From the elevated platforms, workers can install primary beams and floor joists, and they may also be able to tack some of the decking into place. For complete requirements for scaffolds, refer to 29 CFR 1926 Subpart L - Scaffolds.



Ladders (A-frame and platform)

Workers can use A-frame and platform ladders to install floor joists and decking. Platform ladders can provide workers a stable work base and give them more flexibility while maneuvering and positioning floor joists into place. Always follow the manufacturer's instructions about the safe use of, and load limits for, ladders. For requirements for ladders, refer to 29 CFR 1926 Subpart X – Stairways and Ladders.



Personal Fall Arrest System (PFAS)

Once the first row of subfloor has been secured, a PFAS can be used. Strap anchors and specially made leading edge retractable lifeline systems are options to consider.

Personal Fall Arrest System

A PFAS is designed to safely stop a fall before the worker strikes a lower level. The system includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that workers must use full-body harnesses in fall arrest systems. Body belts can cause serious injury during a fall, and OSHA prohibits their use as part of fall arrest systems.

Attaching Anchors

OSHA requires that anchors for a PFAS either be able to hold at least 5,000 pounds per worker or maintain a safety factor of at least two (twice the impact load) and be used under the supervision of a qualified person. Always follow the manufacturer's instructions or consult a qualified person when installing anchors to ensure that they are strong enough to hold the sudden weight of a falling worker. There are anchorages available on the market that can meet OSHA's strength requirements if they are installed in accord with the manufacturer's instructions, with the right number of properly-sized nails or screws.

Fall Restraint

Fall restraint systems prevent falls by keeping the worker from reaching a fall hazard. While fall restraint systems are not mentioned in OSHA's fall protection rules, OSHA will accept a properly used fall restraint system in place of a personal fall arrest system when the restraint system is rigged so that the worker cannot get to the fall hazard. In effect, (if properly used) the system tethers a worker in a manner that will not allow a fall of any distance. A fall restraint system is comprised of a body belt or body harness, an anchorage, connectors, and other necessary equipment. Other components typically include a lanyard, and may also include a lifeline and other devices. Note: A self-retracting lanyard is not appropriate for a fall restraint system unless the worker cannot reach the fall hazard when the lanyard is fully extended.

Always follow the manufacturer's instructions or consult a qualified person to ensure proper installation of anchor points. OSHA recommends that fall restraint systems have the capacity to withstand 3,000 pounds of force or twice the maximum expected force that is needed to restrain the worker from exposure to the fall hazard.

As a result, fall restraint may be a viable way to provide fall protection in situations in which the employer has concerns about the adequacy of available anchorage points for fall arrest equipment.

Guardrails

Guardrails can be used to protect workers from falling through walls, floor openings or window openings that are 6 feet or higher above a lower level. During multi-story construction, many employers provide fall protection by installing guardrails to exterior wall sections prior to erecting them into place. This ensures perimeter protection before workers begin activities on each floor. Placing joists and adding subfloors can be accomplished while workers are protected from falls.

Written Fall Protection Plans

When working at heights of 6 feet or greater, if the employer does not use ladders, scaffolds, aerial lifts

or fall restraint systems and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets or a PFAS), the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

The site-specific fall protection plan must document, for each location, why the use of conventional fall protection equipment is not feasible or will create a greater hazard. The plan must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

OSHA Standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at:

www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922.

OSHA Residential Fall Protection Web Page:

www.osha.gov/doc/topics/residentialprotection/index.html.

OSHA Compliance Guidance:

Compliance Guidance for Residential Construction – STD 03-11-002 (dated 12/16/2010)

Available online at:

www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=4755.

State Plan Guidance: Twenty-seven states or territories currently operate their own OSHA-approved state plans. State plan workplace health and safety standards must be at least as effective as comparable Federal OSHA standards. State plans have the option of promulgating more stringent standards and, therefore, may have additional requirements for residential

construction. For more information on state plans and their requirements, please visit: www.osha.gov/dcsp/osp/statestandards.html.

Help for Employers: OSHA's On-site Consultation Program offers free and confidential advice to small and medium-sized businesses in all states across the country, with priority given to high-hazard worksites. On-site consultation services are separate from enforcement and do not result in penalties or citations. Consultants from state agencies or universities work with employers to identify workplace hazards, provide advice on compliance with OSHA standards, and assist in establishing safety and health management programs. To locate the OSHA Consultation Program nearest you, call 1-800-321-OSHA (6742) or visit: www.osha.gov/dcsp/smallbusiness/consult.html.

Almost every OSHA area office has a compliance assistance specialist to assist employers in complying with OSHA standards. To find the compliance assistance specialist nearest you, call 1-800-321-OSHA (6742) or visit: www.osha.gov/html/RAmap.html.

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For assistance, contact us. We can help. It's confidential.



**Occupational
Safety and Health
Administration**

U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

Reducing Falls during Residential Construction: Erecting Exterior and Interior Walls

Every year, residential construction workers experience fatal injuries due to falls. Erecting walls presents several challenges when it comes to protecting workers from falls. This fact sheet highlights some of the hazards of erecting interior and exterior walls, and details some practical methods that employers can use to protect workers who erect walls. The fall protection methods in this fact sheet may not be suitable in all situations. Employers are responsible for ensuring compliance with applicable OSHA requirements.

Risks While Erecting Exterior and Interior Walls

Workers can be exposed to serious fall hazards while framing and erecting walls – particularly if the structure being built has multiple stories. Openings in walls (such as windows and doors) and floor openings present potential hazards, as workers can fall through them. The use of effective fall protection can prevent a serious fall.

The employer must provide a training program for each worker who might be exposed to fall hazards. The program must enable each worker to recognize fall hazards and each worker must be trained in the procedures to follow to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take steps to reduce the risk of falls.

Reducing Risks:

Planning

Planning for the use of fall protection equipment can help employers protect workers from falls. Before beginning the job, identify fall protection needs. Once appropriate fall protection systems have been identified, have those systems in place before the workers report to the job.

Assembling Walls

Using pre-fabricated wall panels can reduce the amount of time workers are exposed to fall hazards while working at heights. Many employers build walls on site, however. Workers then use the installed floor of the structure as a work platform to frame the wall sections. In either case, employers must determine if fall protection is required and then implement procedures to protect workers. This requirement applies when erecting both interior (e.g., around stairwell openings) and exterior walls.



Lifting Walls into Place

Employers must protect workers from falling while they are raising walls. Once a wall segment is framed it can be lifted into place using a lifting device such as a forklift or wall jack. If a lifting device cannot be used at a particular worksite, steps can be taken to address the fall hazards, as well as the stress and strain hazards that can be present when workers raise walls by hand.

Using the Right Equipment

Employers generally must ensure that workers use fall protection meeting OSHA requirements whenever they work 6 feet or more above a lower level (29 CFR 1926.501(b)(13)). There are guardrail systems and personal fall arrest systems available that can provide workers the flexibility they need during wall construction. Employers also may choose to use scaffolds for wall erection work. (Note: OSHA's fall protection requirements for residential construction work performed on scaffolds are in Subpart L, not in 29 CFR 1926.501(b)(13)).

Guardrails

Guardrail systems can protect workers framing walls around the perimeter and at floor openings. Framed exterior walls typically include openings for windows and doors. Workers can apply sheathing to the frame, and install guardrails across window and door openings, before raising wall sections so that the openings are protected when the walls are set into place.

OSHA generally requires the top rail height to be 42 inches + 3 inches above the walking/working level. A midrail is also required between the top rail and the walking/working surface when there is no wall or parapet at least 21 inches high. For additional requirements for guardrails, refer to 29 CFR 1926.502(b).

During multi-story construction many employers provide fall protection by installing guardrails on exterior wall sections prior to erecting them into place. This ensures perimeter protection before workers begin activities on each additional floor.

Personal Fall Arrest System (PFAS)

A PFAS is a tool available to workers who are framing and erecting walls. In fact, a PFAS is the system of choice for many workers who work at heights. However, a malfunction in any component of a PFAS could be disastrous for a worker. Always follow the manufacturer's instructions on selecting, installing and using PFAS components correctly. Certain anchorage assemblies rotate or offer extension arms to improve mobility and prevent lifelines from contacting the floor surface.

Personal Fall Arrest System

A PFAS is designed to safely stop a fall before the worker strikes a lower level. The system includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that workers must use full-body harnesses in fall arrest systems. Body belts can cause serious injury during a fall, and OSHA prohibits their use as part of fall arrest systems.

Attaching Anchors

OSHA requires that anchors for a PFAS either be able to hold at least 5,000 pounds per worker or maintain a safety factor of at least two (twice the impact load) and be used under the supervision of a qualified person. Always follow the manufacturer's instructions or consult a qualified person when installing anchors to ensure that they are strong enough to hold the sudden weight of a falling worker. There are anchorages available on the market that can meet OSHA's strength requirements if they are installed in accord with the manufacturer's instructions, with the right number of properly-sized nails or screws.

Fall Restraint

Fall restraint systems prevent falls by keeping the worker from reaching a fall hazard. While fall restraint systems are not mentioned in OSHA's fall protection rules, OSHA will accept a properly used fall restraint system in place of a personal fall arrest system when the restraint system is rigged so that the worker cannot get to the fall hazard. In effect, (if properly used) the system tethers a worker in a manner that will not allow a fall of any distance. A fall restraint system is comprised of a body belt or body harness, an anchorage, connectors, and other necessary equipment. Other components typically include a lanyard, and may also include a lifeline and other devices. Note: A self-retracting lanyard is not appropriate for a fall restraint system unless the worker cannot reach the fall hazard when the lanyard is fully extended.

Always follow the manufacturer's instructions or consult a qualified person to ensure proper installation of anchor points. OSHA recommends that fall restraint systems have the capacity to withstand 3,000 pounds of force or twice the maximum expected force that is needed to restrain the worker from exposure to the fall hazard. As a result, fall restraint may be a viable way to provide fall protection in situations in which the employer has concerns about the adequacy of available anchorage points for fall arrest equipment.

Scaffolds

When site conditions permit, employers can use scaffolds to provide a platform for workers erecting and securing walls. Scaffolds can be particularly useful for workers sheathing exterior walls in situations in which sheathing was not completed before the wall was set in place. Always follow the manufacturer's instructions or consult a qualified person to ensure that scaffold systems are used

safely. The employer must ensure that employees on scaffold systems 10 feet or more above a lower level are protected from falls. For other requirements for scaffolds, refer to 29 CFR 1926 Subpart L – Scaffolds.

Written Fall Protection Plans

When working at heights of 6 feet or greater, if the employer does not use ladders, scaffolds, aerial lifts or fall restraint systems and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets or a PFAS), the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan

must be prepared by a qualified person. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

The site-specific fall protection plan must document, for each location, why the use of conventional fall protection equipment is not feasible or will create a greater hazard. The plan must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

OSHA Standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at:

www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922.

OSHA Residential Fall Protection Web Page:

www.osha.gov/doc/topics/residentialprotection/index.html.

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State Plan Guidance: Twenty-seven states or territories currently operate their own OSHA-approved state plans. State plan workplace health and safety standards must be at least as effective as comparable Federal OSHA standards. State plans have the option of promulgating more stringent standards and, therefore, may have additional requirements for residential

construction. For more information on state plans and their requirements, please visit: www.osha.gov/dcsp/osp/statestandards.html.

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OSHA[®] FactSheet

Reducing Falls During Residential Construction: Installing Roof Trusses

Every year, residential construction workers experience numerous fatal injuries due to falls. Installing roof trusses presents several challenges for protecting workers from these falls. This fact sheet highlights some of the hazards of truss installation and lists some practical methods that employers can use to protect workers who install trusses.

Risks During Truss Installation

Accidental falls are the leading cause of death for construction workers and installing roof trusses can be particularly dangerous for two reasons: (1) truss construction usually occurs high above the ground and (2) trusses are not stable until they are properly restrained and braced.

Roof trusses are the highest part of a house frame, so residential construction workers installing them can fall and be seriously injured or even killed. Although personal fall arrest systems (PFAS) are the most widely used form of fall protection in residential construction, they might not be suitable when workers begin installing roof truss sections because there may not be a stable place to attach an anchor. Trusses are designed to support weight from the top down. Until trusses are properly restrained and braced, they are weak if pulled from the side (i.e., subjected to lateral force) as can occur when a truss-mounted fall protection system bears the full weight of a falling worker.

PFAS need strong anchor points that can hold the sudden weight of a falling worker. No anchor with a single connection point, such as a strap anchor or a bolt-on anchor, will protect a falling worker who is attached to a single truss.

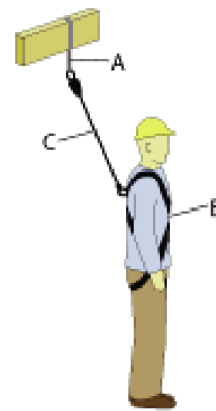
Other systems, such as scaffolds, lifts and ladders can be used to protect workers until a fully interconnected, multi-truss section has been appropriately braced and secured.

OSHA requires fall protection measures for residential construction activities 6 feet or more above lower levels. As a result, employers must plan ahead to ensure they have the right systems in place, and that all workers are properly trained before the job begins.

Personal Fall Arrest System (PFAS)

A PFAS is designed to safely stop a fall before the worker strikes a lower level. It includes three major components:

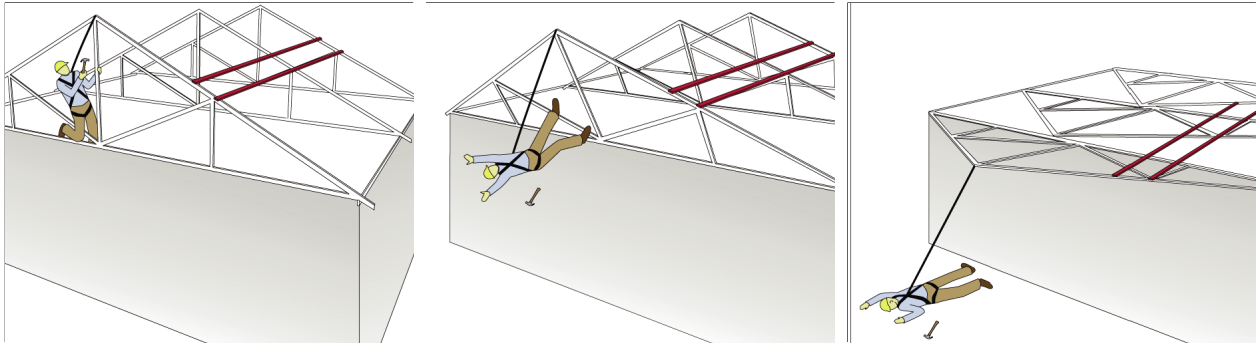
- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that for fall arrest systems, workers must use full-body harnesses. Body belts can cause serious injury during a fall and so OSHA prohibits their use as part of fall arrest systems.

If a worker falls while using a single truss as an anchor point, the whole truss assembly can collapse. Such a structural failure puts workers' lives and entire buildings at risk.



How to Reduce Risks

During Initial Truss Installation

Guardrails, nets, or PFAS (conventional fall protection) may not be practical for all phases of truss installation. Instead, employers should plan to use other methods, such as ground assembly, scaffolds, aerial lifts, or ladders to keep workers safe.

Ground assembly: By assembling a truss section on the ground, employers can greatly reduce the risk of falls for workers. A section of trusses can be sheathed while still on the ground. Peak anchors and lifelines can be pre-installed before the section is lifted into place. Many builders find it efficient to pre-assemble truss sections on the ground and then lift them with a crane so that workers can secure the section to the building frame.

Lifts: Depending on the building layout and the tasks involved, lifts (e.g., aerial, scissor) may be options for setting trusses. Lifts provide a stable, elevated platform from which workers can operate. Workers must follow all safety procedures and conduct all operations from inside the lift basket. For other requirements for using lifts, refer to 29 CFR 1926.453, Aerial Lifts.

Scaffolds: When properly constructed and used, internal and external scaffolds can provide suitable protection for truss-setting tasks. For example, bracket scaffolds placed on the inside or outside of a building provide large, stable walking and working areas for workers. To ensure safe use and appropriate load limits for bracket scaffold systems, workers should always follow the manufacturer's instructions or consult a qualified person. For other requirements for scaffolds, refer to 29 CFR 1926 Subpart L, Scaffolds.

Ladders: For certain truss-setting jobs, platform and stepladders can provide a stable work platform for workers. They can be particularly helpful when set up inside a building. Workers should always use a ladder safely by following the requirements spelled out in 29 CFR 1926 Subpart X, Stairways and Ladders.

Spreader: An engineered spreader, when installed in accordance with the manufacturer's instructions, distributes the force of a PFAS across multiple trusses. The roof trusses do not need to be sheathed to use a spreader. These engineered anchorage devices are reusable and can be uninstalled and reinstalled quickly. **A qualified person should decide if the spreader is suitable for use as an anchor.**

After a Complete Truss Section Is Fully Installed

Once the assembled truss section has been set and secured, it can be used as an attachment point for an anchorage device. From this point on, PFAS can be used to protect workers while they install additional trusses and roof sheathing.

Truss Section

Multiple (typically four) individual trusses that are interconnected and fully sheathed. A truss section that has been restrained, braced and sheathed in accordance with the manufacturer's instructions can provide a suitable structure to establish an anchor point.

Anchors: Fixed anchors provide a secure point where workers can tie off their lifelines as part of a PFAS. Anchors for a PFAS must meet the 5,000-pound strength requirement or maintain a safety factor of at least two under the supervision of a qualified person – 29 CFR 1926.502(d)(15). See

29 CFR 1926 Subpart M, Fall Protection for more information and additional requirements.

Different types of anchors for these systems include, but are not limited to:

- Peak anchors
- Strap anchors
- Bolt-on anchors

Once a group of trusses has been properly restrained and braced, a roof peak anchor can provide a usable tie-off point for a lifeline. Multiple peak anchors and lifelines can protect several workers. After confirmation from the manufacturer, some peak anchors may be strong enough to serve as tie-off points for two lifelines. Peak anchors can also be useful for fall protection during later roofing tasks or while setting another truss section.

Written Fall Protection Plans

If the employer does not use ladders, scaffolds, or aerial lifts, and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets, or PFAS) when working at heights of 6 feet or greater, the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person as defined by 29 CFR 1926.32(m). This person could be the owner, the supervisor, or a worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection. States with OSHA-approved State Plans may have additional requirements for written fall protection plans.

The site-specific fall protection plan must document at each location why the use of conventional fall protection equipment is not feasible or will create a greater hazard. The plan must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

Conventional fall protection equipment can reduce or eliminate the chances of a fatal fall. Written site-specific fall protection plans ensure that protection continues, even when conventional fall protection methods are determined to not be feasible.

OSHA standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922

OSHA Residential Fall Protection Web Page

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NIOSH Prevention Through Design Program

Available online at

<http://www.cdc.gov/niosh/topics/ptd>

OSHA[®] FactSheet

Reducing Falls During Residential Construction: Roof Sheathing

After a roof has been framed, workers can begin installing roof sheathing. Because this work often occurs at great heights, it involves serious fall hazards. This risk makes it important that fall protection systems be used properly during these activities. This fact sheet highlights some of the hazards associated with installing roof sheathing and lists some practical methods that employers may be able to use to protect workers. The fall protection methods in this fact sheet may not be suitable in all situations. Employers are responsible for ensuring compliance with applicable OSHA requirements.

Risks While Installing Roof Sheathing

Workers installing roof sheathing risk permanent injury or death from falls. Even experienced workers are exposed to unpredictable fall hazards caused by uneven sheathing, sudden gusts of wind, loose materials, and surfaces that become slick when wet. Taking appropriate fall protection measures reduces risks and saves lives.

The employer must provide a training program for each worker who might be exposed to fall hazards. The program must enable each worker to recognize the hazards of falling and train each worker in the procedures to follow to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take measures to reduce the risk of falls.

More than one-third of fall deaths in residential construction are caused by falls from roofs.

Roof Sheathing Safely: Important Steps

Pre-planning for the use of fall protection equipment can help employers protect workers from falls. Before beginning the job, focus on identifying fall protection needs. Plan ahead and identify those systems needed to protect workers from falls and have them available before sheathing begins.

Reducing Risks

Workers' risk of falling can be greatly reduced if sheathing is installed onto truss sections while

the truss sections are on the ground. The truss sections can then be hoisted into place. Peak anchors and lifelines can be pre-installed before the sections are lifted onto the frame. Scaffolds, ladders and lifts can provide workers stable walking/working platforms to stand on to secure the pre-fabricated truss section to the building frame.

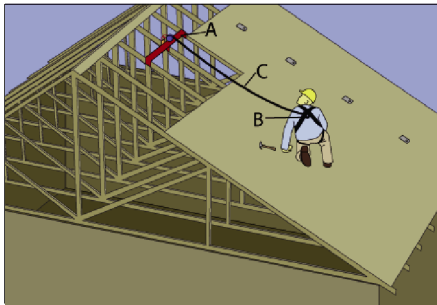
When installing roof sheathing in elevated locations, employers should be aware that roof structures generally are unstable until they are properly braced according to industry standards or some sheathing is in place. If conventional fall protection cannot be used due to unstable conditions, employers should consider using ladders, scaffolds or aerial lifts until the first row of sheathing has been installed and until a qualified person, as defined by 29 CFR 1926.32(m), determines that the roof can be used as an anchorage point for a personal fall arrest system. A qualified person can be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

Personal Fall Arrest System (PFAS): A PFAS is a tool available to workers during roof sheathing jobs. In fact, a PFAS is the system of choice for many workers at heights. However, a breakdown in any component of a PFAS could be disastrous for a worker. Always follow the manufacturer's instructions on selecting, installing and using PFAS components correctly.

Personal Fall Arrest System (PFAS)

A PFAS is designed to safely stop a fall before the worker strikes a lower level. It includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

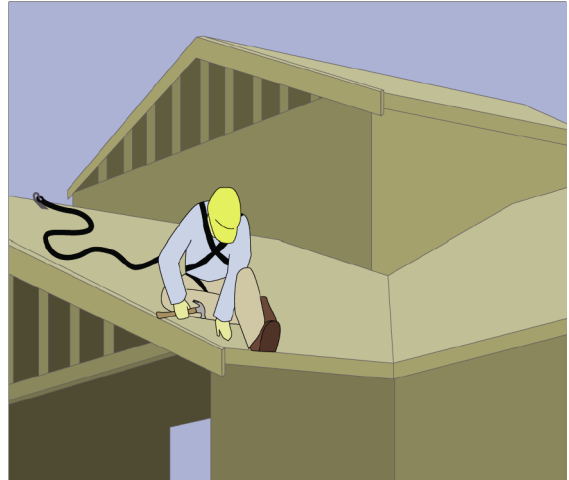
Remember that workers must use full-body harnesses in fall arrest systems. Body belts can cause serious injury during a fall, and OSHA prohibits their use as part of fall arrest systems.

Numerous employers have found that for most roofs, a PFAS can be used once the proper bracing and/or an appropriate amount of sheathing has been established. Anchor points established during truss erection can prove useful during roof sheathing. When placing sheathing on trusses, workers should keep sheathing in front of them as a barrier to protect themselves from falling between truss openings. Once in place, the sheathing can be tacked and nailed down to prevent movement and reduce fall exposures to the inside of the building.

Fall Restraint: While fall restraint systems are not mentioned in OSHA's fall protection rules, OSHA will accept a properly utilized fall restraint system in lieu of a personal fall arrest system when the restraint system is rigged so that the worker cannot get to the fall hazard. In effect, (if properly used) the system tethers a worker in a manner that will not allow a fall of any distance. A fall restraint system is comprised of a body belt or body harness, an anchorage, connectors, and other necessary equipment. Other components

typically include a lanyard, and may also include a lifeline and other devices.

Always follow the manufacturer's instructions or consult a qualified person to ensure proper installation of anchor points. Fall restraint may be a viable way to provide fall protection in situations in which the employer has concerns about the adequacy of available anchorage points for fall arrest equipment.



Attaching Anchors

OSHA requires that anchors for PFAS be able to hold at least 5,000 pounds of weight per person, or maintain a safety factor of at least two (twice the impact load) under the supervision of a qualified person. Always follow the anchor manufacturer's instructions or consult a qualified person when installing anchors to ensure they are strong enough to hold the sudden weight of a falling worker. OSHA believes that anchorages available on the market will meet the strength requirements if they are installed as per the manufacturer's instructions, with the right number of properly sized nails or screws through the roof sheathing and into one or more roof trusses.

When choosing an anchor to use for fall protection, employers have a number of options; for example,

- **Peak anchor:** At the top of the roof, peak anchors are typically solid, non-moving pieces secured to the trusses underneath.
- **Permanent D-rings:** Inexpensive D-ring anchors are attached to the truss frame; they can be left permanently on the roof for future use.

Spreader: Employers may be able to use engineered spreaders as anchor points. When installed in accord with the manufacturer's

instructions, these devices distribute the force of a PFAS across multiple trusses. The roof trusses do not need to be sheathed to use a spreader. These engineered anchorage devices are reusable and can be uninstalled and reinstalled quickly. **A qualified person should decide if the spreader is suitable for use as an anchor.**

Install an anchor above the area being built:

Choose an anchor that is appropriate for the type of roof and anchor location. Depending on the roof design, the best location might be at the peak of the roof, directly over a truss.

Consider leaving anchors in place: Where practical, employers may consider leaving anchors in place. This can make the current job simpler and reduce the burden for roofers in the future.



Scaffolding: Workers installing roof sheathing may be able to use scaffold systems. Bracket scaffolding systems, including top-plate scaffolding systems, can provide workers with stable work platforms. Workers may be able to install the bottom row of roof sheathing while they are standing on these scaffold systems and leaning over the

sheathing. Always follow the manufacturer's instructions or consult a qualified person to ensure proper scaffold assembly and use. For requirements on scaffolds, refer to 29 CFR 1926 Subpart L - Scaffolds.

Ladders (A-frame and platform): If the floor below has been established, A-frame and platform ladders can provide stable work platforms for workers who are installing the first row of sheathing on a roof. Always ensure that a ladder has good footing before mounting it. Consult 29 CFR 1926 Subpart X, Ladders for ladder safety requirements.

Safety net systems: In some situations, safety nets can be placed underneath unsheathed trusses to prevent workers from falling between the trusses to the level below. Safety nets must be installed to prevent contact with the surface or structures below them. For requirements for safety nets, refer to 29 CFR 1926.502(c)-Safety Net Systems.

Staging Material

Loose material and hand-held equipment can create tripping hazards on the roof surface. To

minimize exposure to fall hazards, employers can stage materials so that workers on the roof have quick and safe access to them. While handling material on the roof, the worker should hold the material on the side of his or her body that faces the down-sloped edge to prevent being struck by the materials if they are dropped. Material can also be staged so it cannot slide off the roof edge and potentially strike a worker on the ground. Slide guards can help to keep material from sliding off the roof. Establishing a restricted area around the perimeter of the project can also keep workers out of the danger zone where debris, tools or materials may fall to the ground. The area should be posted with signs that warn of the potential hazard.

Other considerations: Some employers have found success in eliminating fall hazards by using scaffolds and aerial lifts when site conditions permit their use. Fall protection requirements performed on scaffolds and aerial lifts can be found in Subpart L – Scaffolds.

Written Fall Protection Plans

When working at heights of six feet or greater, if the employer does not use ladders, scaffolds, aerial lifts or fall restraint systems and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets or PFAS), the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

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Conventional fall protection equipment can reduce or eliminate the chances of a fatal fall. Otherwise, a written site-specific fall protection plan ensures that protection continues, even when conventional fall protection methods are determined to not be feasible.

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For assistance, contact us. We can help. It's confidential.



U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

DOC FS-3501 1/2012

OSHA[®] FactSheet

Reducing Falls During Residential Construction: Installing Tile Roofs

When workers install tile roofs they are at risk of falling. Using personal fall arrest systems (PFAS) is the most common way to control falls during residential construction. These systems are not the only way to protect a worker and there are other options. This fact sheet describes various steps that roofing contractors can take before and during roofing jobs to keep workers from falling.

Workers Can Fall While Tiling Roofs

Roofers installing tiles risk permanent injury or death from falls. Even experienced roofers are exposed to unpredictable fall hazards caused by uneven sheathing, sudden gusts of wind, loose roofing materials, and surfaces that become slick when wet. Taking appropriate fall protection measures can reduce these risks and save lives. The employer shall provide a training program for each worker who might be exposed to fall hazards. The program shall enable each worker to recognize the hazards of falling and shall train each worker in the procedures to be followed in order to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503.

Tiling Roofs Safely – Important Steps

Before beginning the job, focus on identifying fall protection needs. Survey the roof to determine if there are pre-installed anchorages available that can be used. If not, then begin planning immediately to identify those systems needed to protect workers from falls and have them available before the workers report to the job.

Communicating Your Needs

The contractor that is building and sheathing the roof structure will need fall protection equipment for workers performing these jobs. At a pre-construction meeting, or at the first meeting on the work site, ask the building contractor to leave roof anchors or other fall protection equipment in place after sheathing is completed.

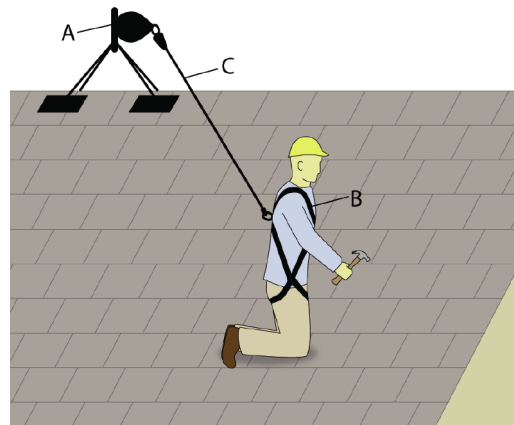
Using the Right Equipment

Roofers must use fall protection equipment that meets OSHA requirements whenever they work 6 feet or more above a lower level. States with OSHA-approved State Plans may have additional

Personal Fall Arrest System (PFAS)

A PFAS is designed to safely stop a fall before the worker strikes a lower level. It includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that for fall arrest systems, workers must use full-body harnesses. Body belts can cause serious injury during a fall and so OSHA prohibits their use as part of fall arrest systems.

requirements beyond OSHA requirements. Depending on the tasks involved, where the work is taking place, and other circumstances specific to tile roofing, contractors may be able to protect

their workers using the following equipment:

- Scaffolds
- Aerial lifts
- Personal Fall Arrest Systems (PFAS)
- Guardrails

Preparing the Work Site

Safeguarding against hazards is as important to preventing fatal falls as having good fall protection equipment. When work begins on a roof, employers must prepare the site by protecting workers from situations that could cause them to fall.

Wet or windy weather

Roofing should only be performed when weather permits. Wind and rain put workers at a greater risk for falling. In damp or windy weather, put work on hold until conditions improve.

Skylights and openings: Every year, workers die from falling through openings and weak surfaces on roofs. Employers must protect employees working around skylights and roof openings with covers, PFAS or guardrails.

Accessing the roof: Safe roof access is as important as having effective fall protection while on the roof. Employers must provide safe access and make sure that workers know how to get up and down from a roof in a way that minimizes the risk of falling. Extension ladders must extend at least three (3) feet above the roof level to ensure safe access to the roof. For other requirements on the safe use of ladders, refer to 29 CFR 1926 Subpart X – Stairways and Ladders.

Stage your materials: Preventing falls is as much about reducing the risks around workers as it is about having the right fall protection equipment.

Be sure to put all working materials in safe spots.

Loose tiles and hand-held equipment create tripping hazards on the roof surface. Workers can fall after tripping or slipping on something they did not see. While walking on the roof and carrying materials, the worker should keep the materials on the down-sloped edge to prevent the materials from falling into the worker if the materials are dropped.

Performing Edgework

When installing the first rows of tile near the roof edge, workers have several fall protection options. In addition to a PFAS, scaffolds and aerial lifts can provide safe access to the edge.

Scaffolds: When properly constructed and used, external scaffolds can provide suitable protection for roof repairs along the edge of the roof. Pump-jack scaffolds offer a secure platform from which to work and can be raised and lowered for specific tasks, such as working from underneath the eaves. Guardrails along the scaffold will provide fall protection. For other requirements for scaffolds, refer to 29 CFR 1926 Subpart L – Scaffolds.

Aerial lifts: A portable boom lift can allow roofers easy access to the leading edge of the roof. The adjustable angle is useful for working on roofs of all grades. It offers an easy place for workers to tie off their lifelines and to work from within the basket. Care must be taken when loading material. Do not overload the lift. For other requirements for lift, refer to 29 CFR 1926.453 – Aerial Lifts.

Anchorage

When working in an area where a scaffold or aerial lift is not practical, workers can use a PFAS with a secure anchor. OSHA requires that anchors for a PFAS are able to hold at least 5,000 pounds of weight per person, or maintain a safety factor of at least two (twice the impact load) under the supervision of a qualified person [29 CFR 1926.502(d)(15)]. Anchors must not be attached to sheathing alone, because it may not be strong enough to hold the sudden weight of a falling worker. Anchors should be fixed to a strong structural feature (like a sheathed truss). Always follow the manufacturer's instructions or consult a qualified person when installing anchors. When choosing an anchor to use for fall protection, employers have a number of options. For example:

- **Peak anchor:** At the top of the roof, peak anchors are typically solid, nonmoving pieces secured by the anchor to the trusses underneath.
- **Permanent D-rings:** Inexpensive D-ring anchors are attached to the truss frame; they are often removed after the job is done, although they can be left permanently on the roof.



Install an anchor above the area being built:

Choose an anchor that is appropriate for the tile type and anchor location. Depending on the roof

design, the best location might be at the peak of the roof, directly over a truss.

Leave anchors in place: Where practical, consider leaving anchors in place. It will make the current job simpler and reduce the burden for roofers in the future. Roofing is not always the last step in the construction process. Skylight windows and solar panels might be installed later during construction. Workers installing those units will also need fall protection anchors.

Written Fall Protection Plans

If the employer does not use ladders, scaffolds, or aerial lifts, and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets, or PFAS) when working at heights of 6 feet or greater, the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person as defined by 29 CFR 1926.32(m). This person could be the owner, the supervisor, or a worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection. States with OSHA-approved State Plans may have additional requirements for written fall protection plans.

The site-specific fall protection plan must document at each location why the use of conventional fall protection equipment is not feasible or will create a greater hazard. The plan must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

Conventional fall protection equipment can reduce or eliminate the chances of a fatal fall. Written site-specific fall protection plans ensure that protection continues, even when conventional fall protection methods are determined to not be feasible.

OSHA standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922

OSHA Residential Fall Protection Web Page:

http://www.osha.gov/doc/residential_fall_protection.html

OSHA Compliance Guidance:

Compliance Guidance for Residential

Construction – STD 03-11-002 (dated 12/16/2010)

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NIOSH Prevention Through Design Program

Available online at

<http://www.cdc.gov/niosh/topics/ptd>

OSHA[®] FactSheet

Reducing Falls During Residential Construction: Installing Standing Seam Metal Roofs

When workers install standing seam metal roofs they are at risk of falling. Using a personal fall arrest system (PFAS) is the most common way to control falls during residential construction. However, these systems are not the only way to protect workers. This fact sheet describes various steps that roofing contractors may be able to take before and during roofing jobs to keep workers from falling. The fall protection methods in this fact sheet may not be suitable in all situations. Employers are responsible for ensuring compliance with applicable OSHA requirements.

Workers Can Fall While Roofing

Roofers installing standing seam metal roofs risk permanent injury or death from falls. Even experienced roofers are exposed to unpredictable fall hazards caused by sudden gusts of wind, loose roofing materials and surfaces that become slick when wet. Taking appropriate fall protection measures reduces risks and saves lives.

The employer must provide a training program for each worker who might be exposed to fall hazards. The program must enable each worker to recognize the hazards of falling and train each worker in the procedures to follow to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take measures to reduce the risk of falls.

More than one-third of fall deaths in residential construction are caused by falls from roofs.

Installing Standing Seam Metal Roofs Safely: Important Steps

Before beginning the job, focus on identifying fall protection needs. Survey the roof to determine if there are pre-installed anchorages available that can be used. If not, then begin planning immediately to identify those systems needed to protect workers from falls and have them in place before the workers report to the job.

Preparing the Work Site

Safeguarding against hazards is as important to preventing fatal falls as having good fall

protection equipment. Before work begins on a roof, employers need to prepare the site to protect workers from situations that could cause them to fall.

Preventing Slip Hazards

Workers should avoid working on metal roofs that are wet and slippery. If work must be performed in such conditions, have the worker wear proper slip-resistant soles to reduce slipping hazards.

Safeguarding skylights and openings: Every year, workers die from falling through openings and weak surfaces on roofs. Employers must protect workers around skylights and roof openings by using a personal fall arrest system (PFAS), covers or guardrails. Covers, when used, must be secured and clearly marked and must be able to withstand twice the weight that may be imposed on it at any one time (29 CFR 1926.502(i)).

Accessing the roof: Employers should ensure that safe roof access and egress is established and make sure that workers know how to get up and down in a way that minimizes the risk of falling. Extension ladders must extend at least 3 feet above the roof level to ensure safe access to the roof. Ladders must also be secured when they are used in locations where they may be displaced. For full requirements on the safe use of ladders, refer to 29 CFR 1926 Subpart X - Ladders.

Staging your materials: Loose material and hand-held equipment can create tripping hazards on the roof surface. To minimize exposure to fall hazards,

employers can stage materials so that workers on the roof have quick and safe access to them. While handling material on the roof, the worker should hold the material on the side of his or her body that faces the down-sloped edge to prevent being struck by the materials if they are dropped. Material can also be staged so it cannot slide off the roof edge and potentially strike a worker on the ground. Slide guards can help to keep material from sliding off the roof. Establishing a restricted area around the perimeter of the project can also keep workers out of the danger zone where debris, tools or materials may fall to the ground. The area should be posted with signs that warn of the potential hazard.

Performing Edgework

Roofers must work near the roof edge when securing metal roof panels to the roofing deck. Scaffolds, ladders, aerial lifts, and PFAS may be able to provide workers with safe access to the edge.

Communicating Your Needs

The contractor who is building and sheathing the roof structure will need fall protection equipment for workers. At a pre-construction meeting or at the first meeting on the work site, a roofer can ask the building contractor to leave roof anchors or other fall protection equipment in place after sheathing is completed.

Selecting the Right Equipment for the Job

Roofers must use fall protection equipment that meets OSHA requirements whenever they work 6 feet or more above a lower level. Depending on the tasks involved, where the work is taking place, and other circumstances specific to standing seam metal roofing, contractors can protect their workers using the following equipment:

- Personal fall arrest systems;
- Guardrails; or
- Ladders.

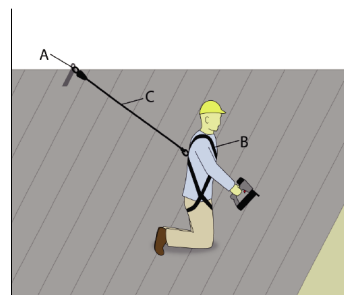
Note: Fall protection requirements for residential construction work performed on ladders are in Subpart X, not in 29 CFR 1926.501(b)(13).

Personal Fall Arrest System: A PFAS is one tool available to workers during roofing jobs. In fact, a PFAS is the system of choice for many workers at heights. However, a breakdown in any component of a PFAS could be disastrous for a worker. Always follow the manufacturer's instructions on selecting, installing and using PFAS components correctly.

Personal Fall Arrest System (PFAS)

A PFAS is designed to safely stop a fall before the worker strikes a lower level. It includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that workers must use full-body harnesses in fall arrest systems. Body belts can cause serious injury during a fall, and OSHA prohibits their use as part of fall arrest systems.

Fall Restraint: While fall restraint systems are not mentioned in OSHA's fall protection rules, OSHA will accept a properly utilized fall restraint system instead of a personal fall arrest system when the restraint system is rigged so that the worker cannot get to the fall hazard. In effect, (if properly used) the system tethers a worker in a manner that will not allow a fall of any distance. A fall restraint system is comprised of a body belt or body harness, an anchorage, connectors, and other necessary equipment. Other components typically include a lanyard, and may also include a lifeline and other devices.

Always follow the manufacturer's instructions or consult a qualified person to ensure proper installation of anchor points. Fall restraint may be a viable way to provide fall protection in situations in which the employer has concerns about the adequacy of available anchorage points for fall arrest equipment.

Attaching Anchors

OSHA requires that anchors for a PFAS be able to hold at least 5,000 pounds of weight per person or maintain a safety factor of at least two (twice the impact load) under the supervision of a qualified person, as defined by 29 CFR 1926.32(m). This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

Always follow the manufacturer's instructions or consult a qualified person when installing anchors to ensure they are strong enough to hold the sudden weight of a falling worker. OSHA believes that anchorages available on the market will meet the strength requirements if they are installed as per the manufacturer's instructions, with the right number of properly sized nails or screws through the roof sheathing and into one or more roof trusses.



When choosing an anchor to use for fall protection, employers have a number of options; for example,

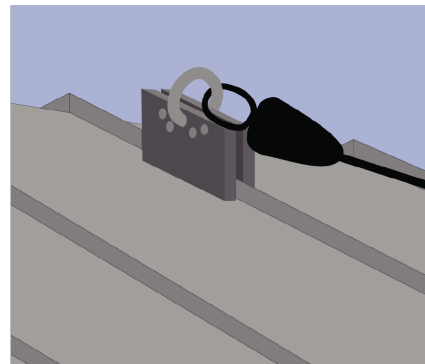
- **Peak anchor:** At the top of the roof, peak anchors are typically solid, non-moving pieces secured to the trusses underneath.
- **Permanent D-rings:** Inexpensive D-ring anchors are attached to the truss frame; they can be left permanently on the roof for future use.
- **Standing seam roof clamps:** There are different types of anchors available for standing seam metal roofs. Employers need to ensure that the type used is specifically designed for residential roofing. Always follow the manufacturer's instructions for safe installation and use. These clamps allow workers to securely anchor to the roof without damaging or penetrating the finished roof. The clamps are removed once work is complete and they can be reused,

making them a practical option for anchorage when installing or repairing standing seam metal roofs.

Install an anchor above the area being built:

Choose an anchor that is appropriate for the standing seam metal roof panels and anchor location. Depending on the roof design, the best location might be at the peak of the roof, directly over a truss.

Consider leaving anchors in place: Where practical, employers may consider leaving anchors in place. This can make the current job simpler and reduce the burden for roofers in the future. Roofing is not always the last step in the construction process. Skylight windows and solar panels might be installed later during construction. Workers installing those units will also need fall protection anchors.



Other considerations: Some employers have found success in eliminating fall hazards by using scaffolds and aerial lifts when site conditions permit their use. Fall protection requirements performed on scaffolds and aerial lifts can be found in 29 CFR 1926 Subpart L – Scaffolds.

Written Fall Protection Plans

When working at heights of 6 feet or greater, if the employer does not use ladders, scaffolds, aerial lifts or fall restraint systems and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets or PFAS), the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

The site-specific fall protection plan must document, for each location, why the use of

conventional fall protection equipment is not feasible or will create a greater hazard. The plan must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

Conventional fall protection equipment can reduce or eliminate the chances of a fatal fall. Otherwise, a written site-specific fall protection plan ensures that protection continues, even when conventional fall protection methods are determined to not be feasible.

OSHA Standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at
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OSHA Residential Fall Protection Web Page:
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**Occupational
Safety and Health
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OSHA[®] FactSheet

Reducing Falls During Residential Construction: Re-Roofing

Re-roofing exposes workers to the hazards of demolition work at heights. With the proper fall protection, the risk of serious falls can be substantially reduced. This fact sheet highlights some of the hazards workers encounter during re-roofing and lists some practical methods employers can use to protect workers who replace roofs. The fall protection methods in this fact sheet may not be suitable in all situations. Employers are responsible for ensuring compliance with applicable OSHA requirements.

Risks During Re-Roofing

Workers replacing roofs risk permanent injury or death from falls while they demolish old roofs and install new roofing material (for example, shingles, tiles, or slate). Even experienced roofers are exposed to unpredictable fall hazards caused by uneven sheathing, sudden gusts of wind, loose roofing materials, and surfaces that become slick when wet. Taking appropriate fall protection measures reduces risks and saves lives.

The employer must provide a training program for each worker who might be exposed to fall hazards. The program must enable each worker to recognize the hazards of falling and train each worker in the procedures to follow to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take measures to reduce the risk of falls.

More than one-third of fall deaths in residential construction are caused by falls from roofs.

Safe Roofing Practices: Important Steps

Before beginning the job, focus on identifying fall protection needs. Survey the roof to determine if there are pre-installed anchorages available that can be used. If not, then plan immediately to identify those systems needed to protect workers from falls and have them in place before the workers report to the job.

Reducing Risks:

Determining Structural Integrity

Many workers have been injured when the roofs they were working on collapsed from under them. Employers must determine the structural integrity

of the roof and take all necessary precautions to protect the workers before the job begins (29 CFR 1926.501(a)(2)). If workers notice signs of structural deterioration (for example, dry rot), a competent person should evaluate the area.

Other considerations for a safe construction site:

- Guard against falls through skylights or other roof openings. Use a guardrail system, a personal fall arrest system (PFAS), or a protective cover that will support two times the weight that may be imposed on it at any one time. For additional information on protecting workers around skylight and other roof openings, refer to 29 CFR 1926.501(b)(4) and 29 CFR 1926.502(i).
- Appropriate footwear is important personal protective equipment on any construction site, but it is critical during roof demolition. A nail or shingle-removal tool injury can cause a worker to lose concentration and fall.
- Workers should be careful of air hoses and power cords for nail guns and other electrical equipment. If a worker steps on one, hoses and cords can slip underfoot and lead to falls.

Staging Material

Loose material and hand-held equipment can create tripping hazards on the roof surface. To minimize exposure to fall hazards, employers can stage materials so that workers on the roof have quick and safe access to them. While handling material on the roof, the worker should hold the material on the side of his or her body that faces the down-sloped edge to prevent being struck by the materials if they are dropped. Material can also be staged so it cannot slide off the roof edge and potentially strike a worker on the ground. Slide guards can help to keep material from

sliding off the roof. Establishing a restricted area around the perimeter of the project can also keep workers out of the danger zone where debris, tools or materials may fall to the ground. The area should be posted with signs that warn of the potential hazard.

Protect Workers on the Ground

During the demolition phase, protect workers on the ground from falling debris by controlling how debris leaves the roof. Consider using an all-terrain forklift to elevate a disposal box to the roof level. This method makes cleanup after the job particularly easy.

Using the Right Equipment

Employers must provide roofers fall protection equipment that meets OSHA requirements whenever they work 6 feet or more above a lower level. There are fall protection systems available that can provide roofers the flexibility they need during demolition and roof installation. Some are more efficient than others because, in many cases, the employer can use the same system for both processes. Each phase of roof replacement has different challenges, but the risk of falling remains constant. Contractors may be able to protect their workers using the following equipment:

- Personal fall arrest systems;
- Guardrails; or
- Ladders.

Note: Fall protection requirements for residential construction work performed on ladders are in Subpart X, not in 29 CFR 1926.501(b)(13).

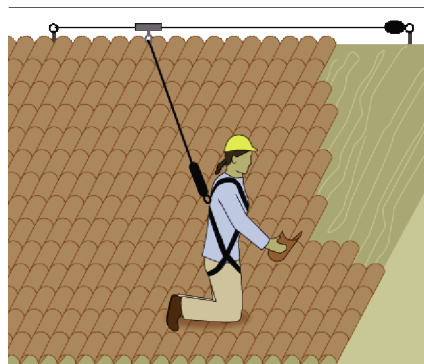
Providing Fall Protection for the Whole Job

Personal fall arrest system: A PFAS is a tool available to roofers during replacement jobs. In fact, a PFAS is the system of choice for many roofers. However, a breakdown in any component of a PFAS could be disastrous for a worker. Always follow the manufacturer's instructions on selecting, installing and using PFAS components correctly. Some PFASs include special elevated anchor assemblies that permit the system to protect workers even when they stand near the anchor locations. Certain anchorage assemblies rotate or offer extension arms to improve mobility and prevent lifelines from contacting the roof surface. This is particularly useful during roof demolition when a line could catch on a nail or debris.

Personal Fall Arrest System (PFAS)

A PFAS is designed to safely stop a fall before the worker strikes a lower level. It includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



Horizontal Lifeline

For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that workers must use full-body harnesses in fall arrest systems. Body belts can cause serious injury during a fall, and OSHA prohibits their use as part of fall arrest systems.

Horizontal lifeline: An engineered horizontal lifeline system, when used as part of a PFAS, is another way to increase the area in which a worker is protected. Install the system following the manufacturer's instructions and under the supervision of a qualified person. Horizontal lifelines must be designed to maintain a safety factor of at least two (twice the impact load). For requirements for horizontal lifelines, refer to 29 CFR 1926.502(d)(8).

Rope grabs: Instead of attaching themselves to a fixed anchor, workers may be able to use adjustable rope grabs, another available component of a PFAS. This inexpensive and very popular system is the fall protection system of choice for many roofers. Rope grabs allow workers to adjust the length of the lifeline and can be useful when workers are moving about the roof frequently. The anchored ropes can be as long as necessary,

making this form of fall protection highly versatile. Roofers who use rope grabs need to constantly take up the slack out of the line. Too much slack could allow a worker to free fall more than six feet off the roof if they slip. Training and monitoring are critical to the safe use of rope grabs.



Rope Grab: Ensure that a stopping mechanism prevents workers using rope grabs from backing down over the roof edge. This mechanism could be an added attachment or a simple knot in the rope.

Fall Restraint: While fall restraint systems are not mentioned in OSHA's fall protection rules, OSHA will accept a properly utilized fall restraint system instead of a personal fall arrest system when the restraint system is rigged so that the worker cannot get to the fall hazard. In effect, (if properly used) the system tethers a worker in a manner that will not allow a fall of any distance. A fall restraint system is comprised of a body belt or body harness, an anchorage, connectors, and other necessary equipment. Other components typically include a lanyard, and may also include a lifeline and other devices.

Always follow the manufacturer's instructions or consult a qualified person to ensure proper installation of anchor points. Fall restraint may be a viable way to provide fall protection in situations in which the employer has concerns about the adequacy of available anchorage points for fall arrest equipment.

Temporary guardrails: Removeable guardrail systems can offer roofers effective protection when installed around the roof perimeter. Always follow the manufacturer's instructions or consult a qualified person, as defined by 29 CFR 1926.32(m), for proper guardrail installation. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection. For require-

ments for guardrails, refer to 29 CFR 1926.502(b)-Guardrail Systems.

Other considerations: Some employers have found success in eliminating fall hazards by using scaffolds and aerial lifts when site conditions permit their use. Fall protection requirements performed on scaffolds and aerial lifts can be found in 29 CFR 1926 Subpart L – Scaffolds.

Attaching Anchors

OSHA requires that anchors for PFASs be able to hold at least 5,000 pounds of weight per person or maintain a safety factor of at least two (twice the impact load) under the supervision of a qualified person. Always follow the manufacturer's instructions or consult a qualified person when installing anchors to ensure they are strong enough to hold the sudden weight of a falling worker. OSHA believes that anchorages available on the market will meet the strength requirements if they are installed as per the manufacturer's instructions, with the right number of properly sized nails or screws through the roof sheathing and into one or more roof trusses.

When choosing an anchor to use for fall protection, employers have a number of options; for example,

- **Peak anchor:** At the top of the roof, peak anchors are typically solid, non-moving pieces secured to the trusses underneath.
- **Permanent D-rings:** Inexpensive D-ring anchors can be attached to the truss frame; they can be left permanently on the roof for future use.

Install an anchor above the area being built:

Choose an anchor that is appropriate for the type of roof and anchor location. Depending on the roof design, the best location might be at the peak of the roof, directly over a truss.

Consider leaving anchors in place: Where practical, employers may consider leaving anchors in place. This can make the current job simpler and reduce the burden for roofers in the future.

Written Fall Protection Plans

When working at heights of 6 feet or greater, if the employer does not use ladders, scaffolds, aerial lifts or fall restraint systems and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets or PFAS), the employer must develop a written site-specific fall

protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

The site-specific fall protection plan must document, for each location, why the use of conventional fall protection equipment is not feasible or will create a greater hazard. The plan

must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

Conventional fall protection equipment can reduce or eliminate the chances of a fatal fall. Otherwise, a written site-specific fall protection plan ensures that protection continues, even when conventional fall protection methods are determined to not be feasible.

OSHA Standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at

www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922.

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For assistance, contact us. We can help. It's confidential.



**U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)**

OSHA[®] FactSheet

Reducing Falls During Residential Construction: Roof Repair

Residential roof repair requires workers to operate on existing, largely intact roofs. These roofs are rarely designed with fall protection in mind, so roofers making repairs must plan ahead and take steps to reduce the risk of falls. This fact sheet describes several fall protection methods that contractors can incorporate into roof repair jobs so that roofers can work safely.

Risks During Roof Repair

Roofers typically work at heights that put them at risk for falls. Workers making roof repairs face the same hazards, but they can be at increased risk if the roof shows signs of lost integrity or if they are uncertain how to use fall protection on a roof that is already weatherproofed. The employer shall provide a training program for each worker who might be exposed to fall hazards. The program shall enable each worker to recognize the hazards of falling and shall train each worker in the procedures to be followed in order to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take measures to reduce the risk of falls. For patching and repair jobs, roofers have several options, including scaffolding, aerial lifts and various types of conventional fall protection. The best choice depends on where the repair is needed and on the type of building.

How to Reduce Risk

Structural Integrity

Employers must determine the structural integrity of the roof and take all necessary precautions to protect the workers before repairs begin. If workers notice signs of structural deterioration (e.g., dry rot) as old weatherproofing is removed, a competent person should evaluate the area.

At the Roof's Edge

Access from stable platforms: When the damaged section of roof is along an edge, a roofer can work from a scaffold or aerial lift. Regardless of the condition of the roof, this equipment provides safe, stable work platforms from which the worker can reach the area to be repaired.

Lifts: Depending on the building layout and the tasks involved, lifts (e.g., scissor, aerial) may be an option for roofing work near the edge. Lifts provide stable, elevated platforms from which workers can operate safely. For small tasks, aerial lifts might be more efficient than installing scaffolds. Plus, aerial lifts are a practical way to get to a customized height above or below the roof level. Care must be taken when loading material. Do not overload the lift. For more information on the safe operation of aerial and scissor lifts, refer to 29 CFR 1926.453, Aerial Lifts and 29 CFR 1926.452(w), Mobile Scaffolds.

Scaffolds: When properly constructed and used, external scaffolds can provide suitable protection for roof repairs along the edge of the roof. Pump-jack scaffolds offer a secure platform from which to work and can be raised and lowered for specific tasks, such as working from underneath the eaves. Guardrails installed along the open side of the scaffold provide fall protection. For other requirements for scaffolds, refer to 29 CFR 1926 Subpart L-Scaffolds.

Working Higher Up on the Roof

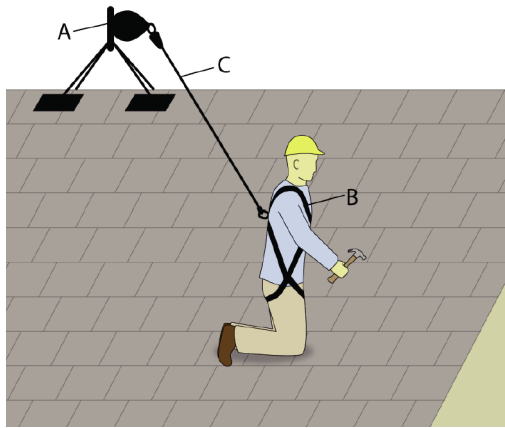
Scaffolds: When working farther up on the roof and beyond arm's reach, scaffolds can still provide fall protection if they are properly constructed. The top rail may have to extend higher than 45 inches above the roof surface to adequately protect workers from falls. For other requirements on how to build a secure scaffold, refer to the 29 CFR 1926 Subpart L – Scaffolds.

Personal Fall Arrest System (PFAS): A PFAS is another tool available to roofers during repair jobs. In fact, a PFAS is usually the system of choice for most roofers. A breakdown in any of these parts could be disastrous for a worker.

Personal Fall Arrest System (PFAS)

A PFAS is designed to safely stop a fall before the worker strikes a lower level. It includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full body **harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that for fall arrest systems, workers must use full-body harnesses. Body belts can cause serious injury during a fall and so OSHA prohibits their use as part of fall arrest systems.

Installing, Finding and Using Anchors

Unlike other roofing jobs, patching and repair involves otherwise intact roofs. Selecting a location to install an anchor is a critical step in avoiding a fatal fall. An anchor gives the worker a secure point to tie off the lifeline for a fall arrest system. Most of the time, existing residential roofs will not have permanent anchors available for use as fall protection. However, a qualified person should survey the roof to confirm that this is the case. An anchor for a fall arrest system must meet the 5,000-pound strength requirement or maintain a safety factor of at least two (twice the impact load) under supervision of a qualified person [29 CFR 1926.502(d)(15)].

Identifying existing anchors: Inspect the ridge cap and last rows of shingles for permanently installed anchors. This activity should be performed from ground level. If present, these may

be fastened to the top chord or other frame part during construction. Anchors could also have been installed with the original roof, using a low-profile style sometimes painted to match the roof color (making it less obvious from the ground).

When available, existing anchors might be effective points for a worker to tie off. Before using them as tie-off points, have a qualified person inspect them to make sure they can support the weight of a falling worker. The qualified person should make sure that the anchor is solid, unbent, and well-fixed into the wood frame below. See 29 CFR 1926 Subpart M, Appendix C, for guidance about testing anchorage points.

Existing anchors are rare, but they may become more common as builders embrace practices that “design out” safety hazards.

In its *Prevention Through Design* program, the National Institute for Occupational Safety and Health (NIOSH) promotes construction practices that minimize risks to workers early in the design process.



Retrofit with anchors: If the roof was not fitted with permanent anchors, employers can install them as the first phase of the job. This retrofit process should be planned so that the roof remains intact and does not leak after the job is completed. It will likely be necessary to replace an additional shingle or reset a couple shingles or tiles. ***If attaching a new anchor, roofers must fix it to the truss or rafter structure underneath. Roof sheathing does not provide enough support by itself.***

Always follow the manufacturer’s instructions, or consult a professional engineer, for proper installation. Here are some anchor options that could be used, depending on the roof design:

- **Peak anchor:** At the apex of the roof, peak anchors are typically solid, unmoving pieces

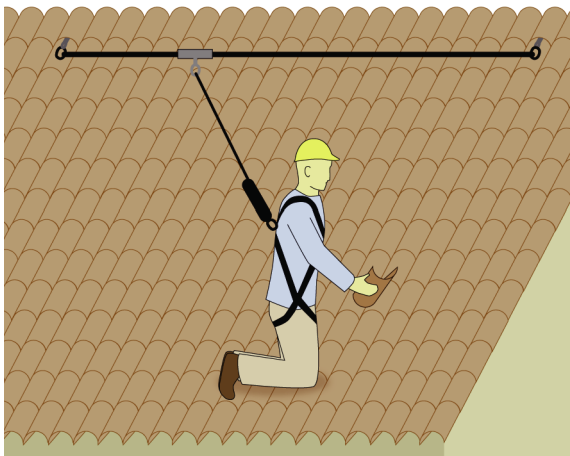
secured to the trusses underneath.

- Permanent D-rings: Inexpensive D-ring anchors attached to the truss frame that can be removed after the job is done, or left permanently on the roof.

Consider the anchor location: Depending on the roof design, some roofers choose the peak of the roof, directly over a truss. There, it will be above the worker and it will be easy to replace a small section of the ridge cap if the anchor is removed when the job is complete. Always follow the anchor manufacturer's installation instructions. See 29 CFR 1926 Subpart M, Fall Protection, for more information and additional requirements for anchor installation and use.

Add anchor points: Depending on the size of the repair job and the number of workers who need to be on the roof, it might be necessary to install more than one anchor.

An engineered horizontal lifeline is another way to increase the area in which a worker is protected. The system should be installed following the manufacturer's instructions or under the supervision of a qualified person.



Leave anchors in place: Where practical, consider leaving roof anchors in place. It will make the current job simpler and reduce the burden for roofers in the future.

Safe Roof Repair – Important Steps

- Before beginning the job, focus on identifying fall protection needs.

- Guard against falls through skylights or other roof openings. Use a guardrail system, PFAS or protective cover that will support two times the weight of a worker.
- If necessary to protect workers below from falling debris, set up a work zone while roofers remove old roofing materials from the repair area.
- Workers should be careful of air hoses and power cords for nail guns and other electrical equipment. If a worker steps on one, hoses and cords can slip underfoot and lead to falls.
- Remember to place any removed shingles or replacement tiles in a safe location. If unsecured, these materials can visually blend in against the roof and create a dangerous trip hazard.
- New materials staged on the roof should be placed so that they are safe and secure.

Written Fall Protection Plans

If the employer does not use ladders, scaffolds, or aerial lifts, and can demonstrate that it is not feasible or would create a greater hazard to use conventional fall protection equipment (guardrails, safety nets, or PFAS) when working at heights of 6 feet or greater, the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person as defined by 29 CFR 1926.32(m). This person could be the owner, the supervisor, or a worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection. States with OSHA-approved State Plans may have additional requirements for written fall protection plans.

The site-specific fall protection plan must document at each location why the use of conventional fall protection equipment is not feasible or will create a greater hazard. The plan must also describe the alternative methods that the employer will use so that workers are protected from falls. Workers and their supervisors must be trained on the proper use of those other fall protection methods.

Conventional fall protection equipment can reduce or eliminate the chances of a fatal fall. Written site-specific fall protection plans ensure that protection continues, even when conventional fall protection methods are determined to not be feasible.

OSHA standard:

29 CFR 1926 Subpart M – Fall Protection

Available online at

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10922

OSHA Residential Fall Protection Web Page

http://www.osha.gov/doc/residential_fall_protection.html

OSHA Compliance Guidance:

Compliance Guidance for Residential

Construction – STD 03-11-002 (dated 12/16/2010)

Available online at

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=4755

State Plan Guidance: States with OSHA-approved State Plans may have additional requirements for Residential Roofing within State Plans. For more information on these requirements, please visit: <http://www.osha.gov/dcsp/osp/statestandards.html>.

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NIOSH Prevention Through Design Program

Available online at

<http://www.cdc.gov/niosh/topics/ptd>

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U.S. Department of Labor
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DOC FS-3479 9/2011

Reducing Falls during Residential Construction: Working in Attics

Protecting workers from falls while working in attics can be challenging for some employers. This fact sheet highlights some of the hazards of attic work and details some practical methods that employers can use to protect those who work in attics. The fall protection methods in this fact sheet may not be suitable in all situations. Employers are responsible for ensuring compliance with applicable OSHA requirements.

Risk of Falls during Attic Work

Working in a low attic can be difficult. Employees moving through these spaces may be exposed to fall hazards at the openings between truss chords. Exposed nails, cables, wires, low-hanging rafters or cross-beams, hot conditions, poor lighting, and truss chords hidden by deep insulation, can add to the risk of falling.

The employer must provide a training program for each worker who might be exposed to fall hazards. The program must train each worker to recognize fall hazards and to know the procedures to follow to minimize these hazards. For fall protection training requirements, refer to 29 CFR 1926.503. In all cases, employers must evaluate the hazards and take steps to reduce the risk of falls. Using appropriate fall protection measures reduces risks and saves lives.

Reducing Risks:

Planning

Planning for the use of fall protection equipment can help employers protect workers from falls. Before beginning the job, identify fall protection needs. Survey the attic to determine what fall protection systems can be used. Plan ahead and have those systems in place before the workers report to the job.

Determining Structural Integrity of Truss Chords or Ceiling Joists

Workers can be injured if they fall through the ceiling to a lower level. Employers must determine if the walking/working surfaces in attics have the strength and structural integrity to support workers safely (29 CFR 1926.501(a)(2)). Only after this determination has been made should workers be allowed to enter those areas. Using a piece of plywood or planking to stand on could improve footing.



If the area around the plywood or planking is open, and the work area is 6 feet or more above a lower level, the employer generally must ensure that workers use fall protection meeting OSHA requirements (29 CFR 1926.501(b)(13)). Employers also may choose to use scaffolds or ladders for attic work.

(Note: OSHA's fall protection requirements for residential construction work performed on scaffolds and ladders are specified in Subpart L and Subpart X, respectively, not in 29 CFR 1926.501(b)(13)).

Personal Fall Arrest System (PFAS)

A PFAS is a tool available to workers performing attic work. In fact, a PFAS is the system of choice for many workers who work at heights. However, a malfunction in any component of a PFAS could be disastrous for a worker. Always follow the manufacturer's instructions on selecting, installing and using PFAS components correctly.

Personal Fall Arrest System

A PFAS is designed to safely stop a fall before the worker strikes a lower level. The system includes three major components:

- A. An **anchorage** to which the other components of the PFAS are rigged.
- B. A full **body harness** worn by the worker.
- C. A connector, such as a **lanyard or lifeline**, linking the harness to the anchorage. A rip-stitch lanyard, or deceleration device, is typically a part of the system.



For more information on the requirements for a PFAS, refer to 29 CFR 1926.502(d).

Remember that workers must use full-body harnesses in fall arrest systems. Body belts can cause serious injury during a fall, and OSHA prohibits their use as part of fall arrest systems.

Attaching Anchors

OSHA requires that anchors for a PFAS either be able to hold at least 5,000 pounds per worker or maintain a safety factor of at least two (twice the impact load) and be used under the supervision of a qualified person. Always follow the manufacturer's instructions or consult a qualified person when installing anchors to ensure that they are strong enough to hold the sudden weight of a falling worker. There are anchorages available on the market that can meet OSHA's strength requirements if they are installed in accord with the manufacturer's instructions, with the right number of properly-sized nails or screws. Also, employers may find it possible to provide safe anchorage down the length of an entire attic by properly installing an engineered horizontal lifeline.

Pre-installed Anchorage Systems

With advance planning on new construction projects, some anchorage systems can be pre-installed before the trusses are lifted into position. This method permits workers to attach their lanyards

to an anchorage immediately upon entering the attic space.

Consider leaving anchors in place: Where practical, employers should consider leaving anchors in place. This can make the current job simpler and reduce the burden for attic workers in the future.



A pre-installed attic anchorage system.

Fall Restraint

Fall restraint systems prevent falls by keeping the worker from reaching a fall hazard. While fall restraint systems are not mentioned in OSHA's fall protection rules, OSHA will accept a properly utilized fall restraint system in place of a personal fall arrest system when the restraint system is rigged so that the worker cannot reach the fall hazard. In effect, (if properly used) the system tethers a worker in a manner that will not allow a fall of any distance. A fall restraint system is comprised of a body belt or body harness, an anchorage, connectors, and other necessary equipment. Other components typically include a lanyard, and may also include a lifeline and other devices. Note: A self-retracting lanyard is not appropriate for a fall restraint system unless the worker cannot reach the fall hazard when the lanyard is fully extended.

Always follow the manufacturer's instructions or consult a qualified person to ensure proper installation of anchor points. OSHA recommends that fall restraint systems have the capacity to withstand 3,000 pounds of force or twice the maximum expected force that is needed to restrain the worker from exposure to the fall hazard. As a result, fall restraint may be a viable way to provide fall protection in situations in which the employer has concerns about the adequacy of available anchorage points for fall arrest equipment.

Safety Net Systems

In some situations, employers may be able to place safety nets underneath truss chords to prevent workers from falling to the level below. Safety nets must be installed to prevent contact with the surface or structures below them. For requirements for safety nets, refer to 29 CFR 1926.502(c)–Safety Net Systems.

Scaffolds

Scaffolds, stationary or mobile, can be erected below the attic work area. Workers on the scaffold can work between truss chords and joists to perform some installation activities. For requirements for scaffolds, refer to 29 CFR 1926 Subpart L – Scaffolds.

Ladders

Like scaffolds, A-frame and platform ladders can provide safe platforms from which workers on the lower level can perform some tasks in the attic above. Consult 29 CFR 1926 Subpart X – Stairways and Ladders for ladder safety requirements.

Written Fall Protection Plans

When working at heights of 6 feet or greater, if the employer does not use ladders, scaffolds, aerial lifts or fall restraint systems and can demonstrate that it is not feasible or would create a greater hazard

to use conventional fall protection equipment (guardrails, safety nets or a PFAS), the employer must develop a written site-specific fall protection plan in accord with 29 CFR 1926.502(k). The plan must be prepared by a qualified person. This person could be the owner, the supervisor, or any other worker who has extensive knowledge, training and experience with fall protection and is able to solve problems relating to fall protection.

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State Plan Guidance: Twenty-seven states or territories currently operate their own OSHA-approved state plans. State plan workplace health and safety standards must be at least as effective as comparable Federal OSHA standards. State plans have the option of promulgating more stringent standards and, therefore, may have additional requirements for residential

construction. For more information on state plans and their requirements, please visit:

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**Occupational
Safety and Health
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U.S. Department of Labor
www.osha.gov (800) 321-OSHA (6742)

OSHA FACT Sheet



Lockout/Tagout

What is the OSHA standard for control of hazardous energy sources?

The OSHA standard for *The Control of Hazardous Energy (Lockout/Tagout)*, Title 29 Code of Federal Regulations (CFR) Part 1910.147, addresses the practices and procedures necessary to disable machinery or equipment, thereby preventing the release of hazardous energy while employees perform servicing and maintenance activities. The standard outlines measures for controlling hazardous energies—electrical, mechanical, hydraulic, pneumatic, chemical, thermal, and other energy sources.

In addition, 29 CFR 1910.333 sets forth requirements to protect employees working on electric circuits and equipment. This section requires workers to use safe work practices, including lockout and tagging procedures. These provisions apply when employees are exposed to electrical hazards while working on, near, or with conductors or systems that use electric energy.

Why is controlling hazardous energy sources important?

Employees servicing or maintaining machines or equipment may be exposed to serious physical harm or death if hazardous energy is not properly controlled. Craft workers, machine operators, and laborers are among the 3 million workers who service equipment and face the greatest risk. Compliance with the lockout/tagout standard prevents an estimated 120 fatalities and 50,000 injuries each year. Workers injured on the job from exposure to hazardous energy lose an average of 24 workdays for recuperation.

How can you protect workers?

The lockout/tagout standard establishes the employer's responsibility to protect employees from hazardous energy sources on machines and equipment during service and maintenance.

The standard gives each employer the flexibility to develop an energy control program suited to the needs of the particular workplace and the types of machines and equipment being maintained or serviced. This is generally done by affixing the appropriate lockout or tagout devices to energy-isolating devices and by deenergizing machines and equipment. The standard outlines the steps required to do this.

What do employees need to know?

Employees need to be trained to ensure that they know, understand, and follow the applicable provisions of the hazardous energy control procedures. The training must cover at least three areas: aspects of the employer's energy control program; elements of the energy control procedure relevant to the employee's duties or assignment; and the various requirements of the OSHA standards related to lockout/tagout.

What must employers do to protect employees?

The standards establish requirements that employers must follow when employees are exposed to hazardous energy while servicing and maintaining equipment and machinery. Some of the most critical requirements from these standards are outlined below:

- Develop, implement, and enforce an energy control program.
- Use lockout devices for equipment that can be locked out. Tagout devices may be used in lieu of lockout devices only if the tagout program provides employee protection equivalent to that provided through a lockout program.
- Ensure that new or overhauled equipment is capable of being locked out.
- Develop, implement, and enforce an effective tagout program if machines or equipment are not capable of being locked out.

- Develop, document, implement, and enforce energy control procedures. [See the note to 29 CFR 1910.147(c)(4)(i) for an exception to the documentation requirements.]
- Use only lockout/tagout devices authorized for the particular equipment or machinery and ensure that they are durable, standardized, and substantial.
- Ensure that lockout/tagout devices identify the individual users.
- Establish a policy that permits only the employee who applied a lockout/tagout device to remove it. [See 29 CFR 1910.147(e)(3) for exception.]
- Inspect energy control procedures at least annually.
- Provide effective training as mandated for all employees covered by the standard.
- Comply with the additional energy control provisions in OSHA standards when machines or equipment must be tested or repositioned, when outside contractors work at the site, in group lockout situations, and during shift or personnel changes.

How can you get more information?

OSHA has various publications, standards, technical assistance, and compliance tools to help you, and offers extensive assistance through

its many safety and health programs: workplace consultation, voluntary protection programs, grants, strategic partnerships, state plans, training, and education. Guidance such as OSHA's *Safety and Health Management Program Guidelines* identify elements that are critical to the development of a successful safety and health management system. This and other information are available on OSHA's website at www.osha.gov.

- For a free copy of OSHA publications, send a self-addressed mailing label to this address: OSHA Publications Office, P.O. Box 37535, Washington, DC 20013-7535; or send a request to our fax at (202) 693-2498, or call us at (202) 693-1888.
- To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office under the "U.S. Department of Labor" listing in your phone book, or call us toll-free at **(800) 321-OSHA (6742)**. The teletypewriter (TTY) number is (877) 889-5627.
- To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website.

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Codes of Safe Practices

Adoption of a code of safe practices is required by all employers subject to the Construction Safety Orders as part of its Safety and Health Compliance Program. The Codes of Safe Practices should be conspicuously posted and be available to supervisors and employees.

Codes of Safe Practices have been traditionally used by Trade Contractors to clearly establish safe work rules for their specific trade. The Codes of Safe Practices below are for our company employees and do not necessarily apply to Trade Contractor's employees who should all have their own job-specific Codes.

1. Report to work in good physical condition.
2. Each employee shall have a thorough understanding of his/her specific job and is encouraged to suggest safer ways of completing assigned tasks and for providing a safer workplace. If you are not familiar with the use of any tools, equipment or machinery, ASK YOUR SUPERVISOR for assistance.
3. If you discover a practice or condition that, in your opinion, is not safe, do not ignore it! Report it to your supervisor. If that isn't possible, contact the Project Safety Administrator. Safety concerns may be discussed at safety meetings or at anytime the team member feels there is a safety problem on the job. No reprisals will be taken against you for reporting hazardous condition or practices on the job.
4. All employees should report accidents or illness (and near-miss incidents) and unsafe conditions to their supervisors immediately.
5. Scuffling, practical jokes, or horseplay of any kind is prohibited. Do not disturb or distract your fellow employees while they are working.
6. No one will be allowed on the project under the influence of alcohol or illegal drugs.
7. It is recommended that you use the personal protective equipment and devices provided for your protection. Hard hats should be available for use whenever necessary on all construction projects and if one is not available, ask and one will be provided. An approved construction style boot/shoe is required. Use a safety harness when working in elevated and otherwise unprotected areas – refer to the fall protection plan.
8. All employees are expected to walk and not run while in or around the workplace.
9. Work must be performed according to established procedures – DON'T TAKE SHORT CUTS!
10. Observe good housekeeping methods/techniques; keep work area clear of debris, trash, and unused materials. Store all equipment, materials, and tools in a safe and neat manner.
11. Know the location for and proper use of all fire extinguishers.
12. Before using scaffolds or platforms, be sure they are safely secured with proper planking and handrails installed. Do not move rolling scaffold with workers on them.



Codes of Safe Practices

13. Never enter a trench or excavation five feet or deeper unless properly sloped or shored.
14. Do not begin work without being shown where to locate the First-Aid supplies and emergency phone numbers. Report to your supervisor any shortage or lack of items in the First-Aid Kit.
15. Do not enter into or work in an area without sufficient lighting. Be assured that the area is free of hazards such as items that may cause you to trip and stumble, unsafe ladders, scaffolding equipment, partially framed walls and pits, holes or trenches, etc.
16. Make sure all back-up alarms, horns, lights, hook safety latches, dead-man triggers and similar safety devices are operative at all times. No worker is to make any protective guarding or device ineffective.
17. Be sure all public vehicle and pedestrian traffic is protected from work operations.
18. Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.
19. Read and follow all posted Health and Safety notices and warnings on-site or at the workplace.
20. Every team member is responsible for workplace safety; you should be proactive and assist in making the workplace safer.
21. Bringing firearms to company premises or to the workplace is strictly prohibited.
22. All employees must be protected from exposed rebar – impalement protection.
23. Builder must ensure that all necessary OSHA required permits are up to date and valid.

These are but a few of the Safe Practices we encourage you to consider and adopt and should not be considered to be an exhaustive list. When it comes to Safety, common sense is often the most important code.



Section 4 - Project Description Fact Sheet

Company Name: _____ Division: _____
Jobsite Name: _____ Phone #: _____
Manager/Super Name: _____ Fax #: _____

Type of Project:

Residential ☐ Commercial ☐ Multi-Family ☐ Single Family ☐ Other ☐

Terrain/Topography:

Flat Land ☐ Hills ☐ Roads Installed ☐ Other ☐ _____

Story's:

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ > 6 ☐ #: _____ Mixed ☐

Garage Levels: n/a ☐ 1 ☐ 2 ☐ > 2 ☐ #: _____ Podium Deck: YES ☐ NO ☐

Roof Style: Flat ☐ Peak ☐ Steep ☐ Sky Lights ☐

Height of Buildings: < 35' ☐ > 35' ☐ > 60' ☐ Permit ☐ Man Lift ☐

Status of Production: Offsites ☐ Models ☐ Production ☐

Perimeter Fencing: _____ How many units to be built: _____

Projected Start Date: _____ Completion Date: _____

Nearest Medical Facility: _____

Address Phone #

Zip

Nearest Fire Department: _____

Address Phone #

Zip

Trailer Location: _____



Overview

- Initial Approval: May 1, 1973 (38 FR 10717)
- State Plan Certification: August 19, 1977 (42 FR 41858)
- Operational Status Agreement: July 12, 1990 (55 FR 28613), amended June 9, 2000 (65 FR 36622); new agreement June 2, 2017 ([82 FR 25631](#))

The Department of Industrial Relations (DIR) administers the California State Plan through Cal/OSHA. The main office is located in Oakland.

Coverage

The California State Plan applies to state and local government employers. It does not apply to federal government employers including the United States Postal Service. Federal OSHA covers the issues not covered by the California State Plan. In addition, Federal OSHA retains enforcement of the anti-retaliation provision of the Occupational Safety and Health Act of 1970, Section 11(c), 29 USC 660(c), with respect to the private sector. Cal/OSHA also investigates private and state and local government workplace retaliation cases under a provision analogous to Section 11(c).

Federal OSHA retains the right to exercise concurrent federal authority to inspect any establishment and take appropriate enforcement action, without notice to the employer, when the establishment has refused entry to the State Plan and the State Plan is unable to obtain a warrant to enforce the right of entry. The State Plan advises the OSHA Regional Office of each instance of its inability to obtain a warrant to gain entry to a workplace. The OSHA Regional Office will make a determination as to the appropriate federal action and will notify the State Plan in writing of this determination and the ultimate action taken.

Federal OSHA also retains the right to exercise concurrent federal authority to inspect and take appropriate enforcement action in extraordinary circumstances, when the State Plan is not able to fully or effectively exercise its enforcement authority. Examples of such circumstances include: a substantial, temporary reduction of State Plan resources or staff, legal limitations on State Plan enforcement authority, worksites which lie within more than one State Plan, State Plan inability to enforce effectively a particular standard, or interference with State Plan enforcement due to natural or man-made disasters or emergencies. Such circumstances may call for a limited resumption of federal enforcement authority which may occur at the State Plan's request or upon Federal OSHA's determination after consideration of all relevant factors and after discussion with the State Plan.

Federal OSHA also retains the right to exercise concurrent federal authority to inspect and take appropriate enforcement action at an entire project or facility where federal and state authorities both have enforcement authority in the interest of administrative practicability. Federal enforcement may be exercised immediately upon agreement between federal and state. A brief summary of the California State Plan is included in the Code of Federal Regulations at [29 CFR 1952.7](#). Federal OSHA retains the authority to promulgate, modify, or revoke occupational safety and health standards under Section 6 of the OSH Act. In the event that Federal OSHA resumes enforcement, those federal standards will be enforced. Federal OSHA also retains the authority to monitor the State Plan under Section 18(f) of the OSH Act.

State Plan Standards

Cal/OSHA has adopted occupational safety and health standards which are at least as effective as Federal OSHA standards. Cal/OSHA has also adopted the following unique standards:

- Toxic Chemical Handling and Exposure
- Agriculture
- Repetitive Motion Injuries
- Child Labor
- Heat Exposure
- Noise Exposure
- Injury and Illness Prevention Program
- Aerosol Transmissible Diseases
- Petroleum Drilling and Production
- Petroleum Refining, Transport, and Handling
- Workplace Violence Prevention in Health Care

Enforcement Programs

Cal/OSHA, a part of DIR, implements the California State Plan's enforcement and consultation. Cal/OSHA utilizes the Division of Labor Standards Enforcement (DLSE)'s Policies and Interpretations Manual to provide guidance for the enforcement program. Compliance officers inspect workplaces for hazardous conditions and issue citations and orders where violations are identified. Inspections may be the result of regular scheduling, imminent danger reports, fatalities, and worker complaints or referrals. DLSE enforces the law prohibiting retaliation for occupational safety or health activity. More information on enforcement can be found on the California State Plan website.

Voluntary and Cooperative Programs

Cal/OSHA offers voluntary and cooperative programs focused on reducing injuries, illnesses, and fatalities. Cal/OSHA also offers on-site consultation services which help employers – both public and private – comply with Cal/OSHA or OSHA standards and identify and correct potential safety and health hazards. For more information on these programs, please visit the California State Plan website.

Informal Conferences and Appeals

Cal/OSHA conducts informal conferences in an effort to resolve contested cases. The California Occupational Safety and Health Appeals Board hears and rules on appeals from citations, notifications, and penalties issued by Cal/OSHA's enforcement unit. For more information on these proceedings, please visit the California State Plan website.

Thomas James California Projects maintain an Cal/OSHA compliant Injury & Illness Prevention Program which encompasses the Cal/OSHA Title 8, Code of California Regulations



Overview

- Initial Approval: January 26, 1973 (38 FR 2422)
- State Plan Certification: February 9, 1982 (47 FR 5889)
- Operational Status Agreement: September 25, 1975 (40 FR 44133), amended on June 9, 2000 ([65 FR 36621](#)) and April 19, 2004 ([69 FR 20829](#))

The Washington State Plan is administered by the Department of Labor and Industries, Division of Occupational Safety and Health (DOSH). The main office is located in Tumwater.

Coverage

DOSH covers state and local government workers but does not cover federal government workers, including USPS. Federal OSHA covers the issues not covered by the Washington State Plan. In addition, federal OSHA retains enforcement of the anti-retaliation provision of the Occupational Safety and Health Act of 1970, Section 11(c), 29 USC 660(c), with respect to the private sector. DOSH also investigates private and state and local government workplace retaliation cases under a provision analogous to Section 11(c).

A brief summary of the Washington State Plan is included in the Code of Federal Regulations (CFR) at [29 CFR 1952.4](#). Federal OSHA retains the authority to promulgate, modify, or revoke occupational safety and health standards under Section 6 of the OSH Act. In the event that federal OSHA resumes enforcement, those federal standards will be enforced. Federal OSHA also retains the authority to monitor the State Plan under Section 18(f) of the OSH Act.

State Plan Standards and Regulations

DOSH has adopted OSHA standards that relate to state and local government and private sector workplace operations. DOSH has adopted most OSHA standards by reference. However, there are unique State Plan standards in the following areas (construction specific):

Construction

- | | |
|---|---|
| ▪ Boilers and Pressure Vessels | ▪ Disposal of Waste Materials |
| ▪ First Aid and Emergency Response | ▪ Rigging Requirements for Material Handling |
| ▪ Sanitation | ▪ Slings |
| ▪ Noise Exposure | ▪ Rigging Hardware and Lifting Devices Other than Slings and Rigging Hardware |
| ▪ Ionizing Radiation | ▪ Lifting Devices Other than Slings and Rigging Hardware |
| ▪ Nonionizing Radiation | ▪ Hand and Power Tools |
| ▪ Gases, Vapors, Fumes, Dusts, and Mists | ▪ Welding and Cutting |
| ▪ Lighting and Illumination | ▪ Electrical Hazards |
| ▪ Ventilation | ▪ Fall Protection |
| ▪ Hazard Communication | ▪ Material Hoists, Personnel Hoists and Platforms, and Elevators |
| ▪ Personal Protective/Life Saving Equipment | ▪ Base-Mounted Drum Hoists |
| ▪ Fire Protection and Prevention | ▪ Overhead Hoists |
| ▪ Signaling and Flaggers | |
| ▪ Barricades | |
| ▪ Storage of Materials | |

- Conveyors
- Aerial Cableways and Tramways
- Motor Vehicles, Mechanized Equipment, and Marine Operations
- Excavation, Trenching, and Shoring
- Concrete, Concrete Forms, Shoring, and Masonry Construction
- Steel Erection
- Underground Construction
- Demolition
- Rollover Protective Structures and Overhead Protection
- Stairways
- Asbestos
- Cadmium
- Formaldehyde
- Methylenedianiline
- Lead
- Cranes, Rigging, and Personnel Lifting
- Walking-Working Surfaces
- Confined Spaces
- Roofing Operations
- Asphalt Mixing and Rock Crushing Operations
- House Building and Moving Operations
- Worker Intoxication

Enforcement Programs

DOSH is responsible for the enforcement of occupational safety and health standards and utilizes the DOSH Compliance Manual to provide guidance for the enforcement program. Compliance officers inspect workplaces for hazardous conditions and issue citations where violations of occupational safety and health standards are found. Inspections may be the result of regular scheduling, imminent danger reports, fatalities, and worker complaints or referrals. More information on enforcement in Washington can be found on the Washington State Plan website.

Voluntary and Cooperative Programs

DOSH offers voluntary and cooperative programs focused on reducing injuries, illnesses, and fatalities. DOSH also offers on-site consultation services which help employers – both state and local government and private sector – comply with occupational safety and health standards and identify and correct potential safety and health hazards. For more information on these programs, please visit the Washington State Plan website.

Informal Conferences and Appeals

DOSH conducts informal conferences in an effort to resolve cases. The Washington Board of Industrial Insurance Appeals (BIIA) hears and rules on appeals from citations, notifications, and penalties issued by Washington OSHA's enforcement unit. For more information on these proceedings, please visit the Washington State Plan website.



Overview

- Initial Approval: November 5, 1974 (39 FR 39037)
- State Plan Certification: September 18, 1981 (46 FR 46322)
- 18(e) Final Approval: June 20, 1985 (50 FR 25561)

The Arizona Division of Occupational Safety and Health (ADOSH) is part of the Industrial Commission of Arizona (ICA). The main office is located in Phoenix.

Coverage

The Arizona State Plan applies to state and local government employers. It does not apply to federal government employers including the United States Postal Service. Federal OSHA covers the issues not covered by the Arizona State Plan. In addition, federal OSHA retains enforcement of the anti-retaliation provision of the Occupational Safety and Health Act of 1970, Section 11(c), 29 USC 660(c), with respect to the private sector. ADOSH also investigates private and state and local government workplace retaliation cases under a provision analogous to Section 11(c).

A brief summary of the Arizona State Plan is included in the Code of Federal Regulations at [29 CFR 1952.19](#). Federal OSHA retains the authority to promulgate, modify, or revoke occupational safety and health standards under Section 6 of the OSH Act. In the event that federal OSHA resumes enforcement, those federal standards will be enforced. Federal OSHA also retains the authority to monitor the State Plan under Section 18(f) of the OSH Act.

State Plan Standards

ADOSH has adopted federal OSHA standards and incorporates them by reference. In addition, Arizona has the following unique standards:

- General Industry
- Compressed Gas and Air (General) and Air Receivers
- Commercial Driving Operations
- Construction
- Fall Protection
- Agriculture
- Field Sanitation
- Hand and Portable Powered Tools and Other Hand-Held Equipment
- Enforcement Programs

Enforcement Programs

ADOSH is responsible for the enforcement of ADOSH safety and health standards, regulations, and other provisions, including a prohibition against retaliation for occupational safety or health activity. ADOSH utilizes the OSHA Field Operations Manual (FOM) to provide guidance for its enforcement program. Compliance officers inspect workplaces for hazardous conditions and issue citations where violations of ADOSH standards, regulations, and other provisions of the state occupational safety and health statute are found. Inspections may be the result of regular scheduling, imminent danger

reports, fatalities, and worker complaints or referrals. More information on enforcement in Arizona can be found on the Arizona State Plan website.

Voluntary and Cooperative Programs

ADOSH offers voluntary and cooperative programs focused on reducing injuries, illnesses, and fatalities. ADOSH also offers on-site consultation services which help employers – both state and local government and private – comply with ADOSH standards, regulations, and other provisions of the state occupational safety and health statute, as well as identify and abate potential safety and health hazards. For more information on these programs, please visit the Arizona State Plan website.

Informal Conferences and Appeals

ADOSH management personnel conduct informal conferences in an effort to resolve contested cases. An administrative law judge of the Administrative Law Judge Division hears and rules on contests of citations, notifications, and penalties issued by ADOSH. These decisions may be appealed to an independent review board. For more information on these proceedings, please visit the Arizona State Plan website.

Protecting Workers: Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace

OSHA will update this guidance over time to reflect developments in science, best practices, and standards.

Guidance posted **January 29, 2021**; Updated **June 10, 2021**

Summary of changes **August 13, 2021**

- Update to reflect the [July 27, 2021 Centers for Disease Control and Prevention \(CDC\) mask and testing recommendations for fully vaccinated people](#)
- Reorganize Appendix recommendations for Manufacturing, Meat and Poultry Processing, Seafood Processing, and Agricultural Processing Industries
- Add links to guidance with the most up-to-date content

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Purpose

This guidance is designed to help employers protect workers who are unvaccinated (including people who are not fully vaccinated) or otherwise at-risk (as defined in the text box below), including if they are immunocompromised, and also implement new guidance involving workers who are fully vaccinated but located in [areas of substantial or high community transmission](#).

This guidance contains recommendations as well as descriptions of the Occupational Safety and Health Administration's (OSHA's) mandatory safety and health standards, the latter of which are clearly labeled throughout as "**mandatory OSHA standards**." The recommendations are advisory in nature and informational in content and are intended to assist employers in providing a safe and healthful workplace free from recognized hazards that are causing or likely to cause death or serious physical harm.

OSHA emphasizes that vaccination is the most effective way to protect against severe illness or death from COVID-19. OSHA strongly encourages employers to provide paid time off to workers for the time it takes for them to get vaccinated and recover from any side effects. Employers should also consider working with local public health authorities to provide vaccinations for unvaccinated workers in the workplace. Finally, OSHA suggests that employers consider adopting policies that require workers to get vaccinated or to undergo regular COVID-19 testing – in addition to mask wearing and physical distancing – if they remain unvaccinated. People are considered fully vaccinated for

COVID-19 two weeks or more after they have completed their final dose of a COVID-19 vaccine authorized for Emergency Use Authorization (EUA) by the U.S. Food and Drug Administration in the United States.

Executive Summary

This guidance is intended to help employers and workers not covered by the OSHA's COVID-19 Emergency Temporary Standard (ETS) for Healthcare, helping them identify COVID-19 exposure risks to workers who are unvaccinated or otherwise at risk even if they are fully vaccinated (e.g., if they are immunocompromised). See Text Box: Who Are "At-Risk" Workers?

This guidance is also intended to help employers and workers who are located in [areas of substantial or high community transmission](#), who should take appropriate steps to prevent exposure and infection regardless of vaccination status. The U.S. Centers for Disease Control and Prevention (CDC) reports in its latest [Interim Public Health Recommendations for Fully Vaccinated People](#) that infections in fully vaccinated people (breakthrough infections) happen in only a small proportion of people who are fully vaccinated, even with the Delta variant. Moreover, when these infections occur among vaccinated people, they tend to be mild, reinforcing that vaccines are an effective and critical tool for bringing the pandemic under control.

However, [preliminary evidence](#) suggests that fully vaccinated people who do become infected with the Delta variant can be infectious and can spread the virus to others.

This evidence has led CDC to [update recommendations for fully vaccinated people](#) to reduce their risk of becoming infected with the Delta variant and potentially spreading it to others, including by:

- wearing a mask¹ in public indoor settings in areas of [substantial or high transmission](#);
- choosing to wear a mask regardless of level of transmission, particularly if individuals are at risk or have someone in their household who is at increased risk of severe disease or not fully vaccinated; and
- getting tested 3-5 days following a known exposure to someone with suspected or confirmed COVID-19 and wearing a mask in public indoor settings for 14 days after exposure or until a negative test result.²

In this guidance, OSHA adopts analogous recommendations.

CDC has also updated its guidance for COVID-19 prevention in K-12 schools to recommend universal indoor masking for all teachers, staff, students, and visitors to K-12 schools, regardless of vaccination status.³ CDC's [Face Mask Order](#) requiring masks on public transportation conveyances and inside transportation hubs has not changed, but CDC has announced that it will be amending its Face Masks Order to not require people to wear a mask in outdoor areas of conveyances (if such outdoor areas exist on the conveyance) or while outdoors at transportation hubs, and that it will exercise its enforcement discretion in the meantime.

Who Are "At-Risk Workers"?

Some conditions, such as a prior transplant, as well as prolonged use of corticosteroids or other immune-weakening medications, may affect workers' ability to have a full immune response to vaccination. To understand more about these conditions, see the CDC's page describing [Vaccines for People with Underlying Medical Conditions](#) and further definition of [People with Certain Medical Conditions](#). Under the Americans with Disabilities Act (ADA), workers with disabilities may be [legally entitled](#) to reasonable accommodations that protect them from the risk of contracting COVID-19 if, for example, they cannot be protected through vaccination, cannot be vaccinated, or cannot use face coverings. Employers should consider taking steps to protect these at-risk workers as they would unvaccinated workers, regardless of their vaccination status.

COVID-19 and Prevention

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the virus that causes **COVID-19**, is highly infectious and can spread from person to person, including through aerosol transmission of particles produced when an infected person exhales, talks, vocalizes, sneezes, or coughs. The virus that causes COVID-19 is highly transmissible and can be spread by people who have no symptoms. Particles containing the virus can travel more than 6 feet, especially indoors and in dry conditions (relative humidity below 40%), and can be spread by individuals who do not know they are infected.

Vaccines authorized by the U.S. Food and Drug Administration in the United States are highly effective at protecting most fully vaccinated people against symptomatic and severe COVID-19. OSHA encourages employers to take steps to make it easier for workers to get vaccinated and encourages workers to take advantage of those opportunities. However, CDC recognizes that even some fully vaccinated people who are largely protected against severe illness and death may still be capable of transmitting the virus to others. Therefore, this guidance mirrors CDC's in recommending masking and testing even for fully vaccinated people in certain circumstances.

OSHA also continues to recommend implementing multiple layers of controls (e.g. mask wearing, distancing, and increased ventilation). Along with vaccination, key controls to help protect unvaccinated and other at-risk workers include removing from the workplace all infected people, all people **experiencing COVID symptoms**, and any people who are not fully vaccinated who **have had close contact** with someone with COVID-19 and have not tested negative for COVID-19 immediately if symptoms develop and again at least 5 days after the contact (in which case they may return 7 days after contact). Fully vaccinated people who have had close contact should get tested for COVID-19 3-5 days after exposure and be required to wear face coverings for 14 days after their contact unless they test negative for COVID-19. Additional fundamental controls that protect unvaccinated and other at-risk workers include maintaining ventilation systems, implementing physical distancing, and properly using face coverings (or other Personal Protective Equipment (PPE) and respiratory protection such as N95 respirators when appropriate), and proper cleaning. Fully vaccinated people in areas of substantial or high transmission should be required to wear face coverings inside (or other appropriate PPE and respiratory protection) as well. Employees may request reasonable accommodations, absent an undue hardship, if they are unable to comply with safety requirements due to a disability. For more information, see the Equal Employment Opportunity Commission's (EEOC's) [What You Should Know About COVID-19 and the ADA, the Rehabilitation Act, and Other EEO Laws](#).

Finally, OSHA provides employers with specific guidance for environments at a higher risk for exposure to or spread of COVID-19, primarily workplaces where unvaccinated or otherwise at-risk workers are more likely to be in prolonged, close contact with other workers or the public, or in closed spaces without adequate ventilation.

Scope

OSHA provides this guidance for employers as recommendations to use in protecting unvaccinated workers and otherwise at-risk workers, and to help those workers protect themselves. This guidance also incorporates CDC's recommendations for fully vaccinated workers in areas of substantial or high transmission. Employers and workers should use this guidance to determine any appropriate control measures to implement.

While this guidance addresses most workplaces, many healthcare workplace settings will be covered by the **mandatory OSHA COVID-19 Emergency Temporary Standard**. Pursuant to the Occupational Safety and Health Act (the OSH Act or the Act), employers in those settings must comply with that standard. All employers must comply with any **other applicable mandatory safety and health standards and regulations** issued and enforced either by OSHA or by an OSHA-approved state plan. In addition, the Act's General Duty Clause, Section 5(a)(1), requires employers to provide their workers with a safe and healthful workplace free from recognized hazards that are

causing or likely to cause death or serious physical harm. Employers who are not covered by the OSH Act (like public sector employers in some states) will also find useful control measures in this guidance to help reduce the risk of COVID-19 in their workplaces.

This guidance is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of existing **mandatory OSHA standards**, the latter of which are clearly labeled throughout. The recommendations are advisory in nature and informational in content and are intended to assist employers in recognizing and abating hazards likely to cause death or serious physical harm as part of their obligation to provide a safe and healthful workplace.

About COVID-19

SARS-CoV-2, the virus that causes **COVID-19**, is highly infectious and spreads from person to person, including through aerosol transmission of particles produced when an infected person exhales, talks, vocalizes, sneezes, or coughs. COVID-19 is less commonly transmitted when people touch a contaminated object and then touch their eyes, nose, or mouth. The virus that causes COVID-19 is highly transmissible and can be spread by people who have no symptoms and who do not know they are infected. Particles containing the virus can travel more than 6 feet, especially indoors and in dry conditions with relative humidity below 40%. The [CDC estimates](#) that over fifty percent of the spread of the virus is from individuals with no symptoms at the time of spread.

More information on COVID-19 is available from the [Centers for Disease Control and Prevention](#).

What Workers Need To Know about COVID-19 Protections in the Workplace

SARS-CoV-2, the virus that causes COVID-19, spreads mainly among unvaccinated people who are in [close contact](#) with one another - particularly indoors and especially in [poorly ventilated spaces](#).

[Vaccination](#) is the key element in a multi-layered approach to protect workers. Learn about and take advantage of opportunities that your employer may provide to take time off to get vaccinated. Vaccines authorized by the U.S. Food and Drug Administration are highly effective at protecting vaccinated people against symptomatic and severe COVID-19 illness and death. According to the CDC, a growing body of evidence suggests that fully vaccinated people are less likely to have symptomatic infection or transmit the virus to others. See CDC's [Guidance for Fully Vaccinated People](#); and [Science Brief](#).

You should follow recommended precautions and policies at your workplace. Multi-layered controls tailored to your workplace are especially important for those workers who are unvaccinated or otherwise at-risk. Many employers have established COVID-19 prevention programs that include a number of important steps to keep unvaccinated and otherwise at-risk workers safe. These COVID-19 prevention programs include measures such as telework and flexible schedules, engineering controls (especially ventilation), administrative policies (e.g., vaccination policies), PPE, face coverings, physical distancing, and enhanced cleaning programs with a focus on high-touch surfaces.

In addition, the CDC recommends that fully vaccinated people wear a mask in public indoor settings if they are in an area of [substantial or high transmission](#). Fully vaccinated people might choose to mask regardless of the level of transmission, particularly if they or someone in their household is immunocompromised or at [increased risk for severe disease](#), or if someone in their household is unvaccinated. Ask your employer about plans in your workplace. In addition, employees with disabilities who are at-risk may request reasonable accommodation under the ADA.

Even if your employer does not have a COVID-19 prevention program, if you are unvaccinated or otherwise at risk, you can help protect yourself by following the steps listed below:

- You should get a [COVID-19 vaccine](#) as soon as you can. Ask your employer about opportunities for paid leave, if necessary, to get vaccinated and recover from any side effects.
- Properly wear a face covering over your nose and mouth. [Face coverings](#) are simple barriers worn over the face, nose and chin. They work to help prevent your respiratory droplets or large particles from reaching others. Individuals are encouraged to choose [higher quality masks](#) so that they are providing a greater measure of protection to themselves as well as those around them. CDC provides [general guidance](#) on masks, including face coverings.
- If you are working outdoors, you may opt not to wear face coverings in many circumstances; however, your employer should support you in safely continuing to wear a face covering if you choose, especially if you work closely with other people.
- Unless you are fully vaccinated and not otherwise at-risk, stay far enough away from other people so that you are not breathing in particles produced by them – generally at least 6 feet (about 2 arm lengths), although this approach by itself is not a guarantee that you will avoid infection, especially in enclosed or poorly ventilated spaces. Ask your employer about possible telework and flexible schedule options at your workplace, and take advantage of such policies if possible. Perform work tasks, hold meetings, and take breaks outdoors when possible.
- Participate in any training offered by your employer/building manager to learn how rooms are ventilated effectively, encourage your employer to provide such training if it does not already exist, and notify the building manager if you see vents that are clogged, dirty, or blocked by furniture or equipment.
- Practice good personal hygiene and wash your hands often. Always cover your mouth and nose with a tissue, or the inside of your elbow, when you cough or sneeze, and do not spit. Monitor your health daily and be alert for COVID-19 symptoms (e.g., fever, cough, or shortness of breath). See CDC's [Daily Activities and Going Out](#) and CDC's [Interim Public Health Recommendations for Fully Vaccinated People](#).
- Get tested regularly, especially in [areas of substantial or high community transmission](#).

COVID-19 vaccines are highly effective at keeping you from getting COVID-19. If you are not yet fully vaccinated or are otherwise at risk, optimum protection is provided by using multiple layers of interventions that prevent exposure and infection.

The Roles of Employers and Workers in Responding to COVID-19

Under the OSH Act, employers are responsible for providing a [safe and healthy workplace free from recognized](#) hazards likely to cause death or serious physical harm.

CDC's [Interim Public Health Recommendations for Fully Vaccinated People](#) explains that under some circumstances, fully vaccinated people need not take all the precautions that unvaccinated people should take, except where required by federal, state, local, tribal, or territorial laws, rules and regulations, including local business and workplace guidance. However, in light of evidence related to the Delta variant of the SARS-CoV-2 virus, the CDC updated its guidance to recommend that even people who are fully vaccinated wear a mask in public indoor settings in areas of [substantial or high transmission](#), or if they have had a known exposure to someone with COVID-19 and have not had a subsequent negative test 3-5 days after the last date of that exposure. Schools should continue to follow [applicable CDC guidance](#), which recommends universal indoor masking for all teachers, staff, students, and visitors to K-12 schools, regardless of vaccination status.

Employers should engage with workers and their representatives to determine how to implement multi-layered interventions to protect unvaccinated and otherwise at-risk workers and mitigate the spread of COVID-19, including:

1. ***Facilitate employees getting vaccinated.*** Employers should grant paid time off for employees to get vaccinated and recover from any side effects. The Department of Labor

and OSHA, as well as other federal agencies, are working diligently to ensure access to COVID-19 vaccinations. CDC provides [information on the benefits and safety](#) of vaccinations. Businesses with fewer than 500 employees may be eligible for [tax credits under the American Rescue Plan](#) Act if they provide paid time off from April 1, 2021, through September 30, 2021, for employees who decide to receive the vaccine or to accompany a family or household member to receive the vaccine and to recover from any potential side effects from the vaccine. Employers should also consider working with local public health authorities to provide vaccinations in the workplace for unvaccinated workers. Finally, OSHA suggests that employers consider adopting policies that require workers to get vaccinated or to undergo regular COVID-19 testing – in addition to mask wearing and physical distancing – if they remain unvaccinated.

2. ***Instruct any workers who are infected, unvaccinated workers who have had close contact with someone who [tested positive for SARS-CoV-2](#), and all workers with COVID-19 symptoms to stay home from work*** to prevent or reduce the risk of transmission of the virus that causes COVID-19. As [recommended by the CDC](#), fully vaccinated people who have a known exposure to someone with suspected or confirmed COVID-19 should get tested 3-5 days after exposure and should wear a mask in public indoor settings for 14 days or until they receive a negative test result. People who are not fully vaccinated should be tested immediately after being identified, and, if negative, tested again in 5–7 days after last exposure or immediately if symptoms develop during quarantine. Ensure that absence policies are non-punitive. Eliminate or revise policies that encourage workers to come to work sick or when unvaccinated workers have been exposed to COVID-19. Businesses with fewer than 500 employees may be eligible for refundable tax credits under the American Rescue Plan (ARP) Act if they provide paid time off for sick and family leave to their employees due to COVID-19-related reasons. The ARP tax credits are available to eligible employers that pay sick and family leave for qualified leave from April 1, 2021, through September 30, 2021. More information is [available from the IRS](#).
3. ***Implement physical distancing in all communal work areas for unvaccinated and otherwise at-risk workers.*** A key way to protect such workers is to physically distance them from other such people (workers or customers) – generally at least 6 feet of distance is recommended, although this is not a guarantee of safety, especially in enclosed or poorly ventilated spaces. In a workplace, workers often are required to work in close proximity to each other and/or customers or clients for extended periods of time. Maintaining physical distancing at the workplace for such workers is an important control to limit the spread of COVID-19.

Employers could also limit the number of unvaccinated or otherwise at-risk workers in one place at any given time, for example by implementing flexible worksites (e.g., telework); implementing flexible work hours (e.g., rotate or stagger shifts to limit the number of such workers in the workplace at the same time); delivering services remotely (e.g., phone, video, or web); or implementing flexible meeting and travel options, for such workers.

At fixed workstations where unvaccinated or otherwise at-risk workers are not able to remain at least 6 feet away from other people, transparent shields or other solid barriers can separate these workers from other people. Barriers should block face-to-face pathways between individuals in order to prevent direct transmission of respiratory droplets, and any openings should be placed at the bottom and made as small as possible. The height and posture (sitting or standing) of affected workers, directional airflow, and fire safety should be considered when designing and installing barriers, as should the need for enhanced ventilation.

4. ***Provide [workers with face coverings](#) or surgical masks,⁴ as appropriate, unless their work task requires a respirator or other PPE.*** In addition to unvaccinated and otherwise

at-risk workers, CDC recommends that even fully vaccinated people wear masks in public indoor settings in areas of [substantial or high transmission](#) and notes that fully vaccinated people may appropriately choose to wear masks in public indoor settings regardless of community level of transmission, particularly if they are at risk or have someone in their household who is at risk or not fully vaccinated.

Workers should wear a [face covering](#) that covers the nose and mouth to contain the wearer's respiratory droplets and to help protect others and potentially [themselves](#). Face coverings should be made of at least two layers of a tightly woven breathable fabric, such as cotton, and should not have exhalation valves or vents. They should fit snugly over the nose, mouth, and chin with no large gaps on the outside of the face.

Employers should provide face coverings to workers who request them at no cost (and make replacements available to workers when they request them). Under federal anti-discrimination laws, employers may need to provide [reasonable accommodations](#) for any workers who are unable to wear or have difficulty wearing certain types of face coverings due to a disability or who need a religious accommodation under Title VII of the Civil Rights Act of 1964. In workplaces with employees who are deaf or hard of hearing, employers should consider acquiring masks with clear coverings over the mouth to facilitate lip-reading.

Unless otherwise provided by federal, state, or local requirements, workers who are outdoors may opt not to wear face coverings unless they are at risk, for example, if they are immunocompromised. Regardless, all workers should be supported in continuing to wear a face covering if they choose, especially in order to safely work closely with other people.

When an employer determines that PPE is necessary to protect unvaccinated and otherwise at-risk workers from exposure to COVID-19, the employer must provide PPE in accordance with [relevant mandatory OSHA standards](#) and should consider providing PPE in accordance with other [industry-specific guidance](#). Respirators, if necessary, must be provided and used in compliance with 29 CFR [1910.134](#) (e.g., medical determination, fit testing, training on its correct use), including certain provisions for voluntary use when workers supply their own respirators, and other PPE must be provided and used in accordance with the applicable standards in 29 CFR part 1910, Subpart I (e.g., [1910.132](#) and [133](#)). There are times when PPE is not called for by OSHA standards or other industry-specific guidance, but some workers may have a legal right to PPE as a reasonable accommodation under the ADA. Employers are encouraged to proactively inform employees who have a legal right to PPE as a reasonable accommodation for their disability about how to make such a request. Other workers may want to use PPE if they are still concerned about their personal safety (e.g., if a family member is at higher risk for severe illness, they may want to wear a face shield in addition to a face covering as an added layer of protection). Encourage and support voluntary use of PPE in these circumstances and ensure the equipment is adequate to protect the worker.

For operations where the face covering can become wet and soiled, provide workers with replacements daily or more frequently, as needed. Face shields may be provided for use with face coverings to protect them from getting wet and soiled, but they do not provide adequate protection by themselves. See [CDC's Guide to Masks](#).

Employers with workers in a setting where face coverings may increase the [risk of heat-related illness indoors](#) or [outdoors](#) or cause safety concerns due to introduction of a hazard (for instance, straps getting caught in machinery) may wish to consult with an occupational safety and health professional to help determine the appropriate face covering/respirator use for their setting.

5. **Educate and train workers on your COVID-19 policies and procedures using accessible formats and in languages they understand.** Train managers on how to implement COVID-19 policies. Communicate supportive workplace policies clearly, frequently, and via multiple methods to promote a safe and healthy workplace. Communications should be in plain language that unvaccinated and otherwise at-risk workers understand (including non-English languages, and American Sign Language or other accessible communication methods, if applicable) and in a manner accessible to individuals with disabilities. Training should be directed at employees, contractors, and any other individuals on site, as appropriate, and should include:
 - A. Basic facts about COVID-19, including how it is spread and the importance of physical distancing (including remote work), ventilation, vaccination, use of face coverings, and hand hygiene.
 - B. Workplace policies and procedures implemented to protect workers from COVID-19 hazards.

For basic facts, see [About COVID-19](#) and [What Workers Need to Know About COVID-19](#) above and see more on [vaccinations](#), improving ventilation, physical distancing (including remote work), PPE, and face coverings, respectively, elsewhere in this document. Some means of tracking which workers have received this information, and when, could be utilized by the employer as appropriate.

In addition, ensure that workers understand their rights to a safe and healthful work environment, whom to contact with questions or concerns about workplace safety and health, and their right to raise workplace safety and health concerns free from retaliation. (See [Implementing Protections from Retaliation](#), below.) This information should also be provided in a language that workers understand. Ensure supervisors are familiar with workplace flexibilities and other human resources policies and procedures.

6. **Suggest or require that unvaccinated customers, visitors, or guests wear face coverings in public-facing workplaces such as retail establishments, and that all customers, visitors, or guests wear face coverings in public, indoor settings in areas of substantial or high transmission.** This could include posting a notice or [otherwise suggesting](#) or requiring that people wear face coverings, even if no longer required by your jurisdiction. Individuals who are under the age of 2 or are actively consuming food or beverages on site need not wear face coverings.
7. **Maintain Ventilation Systems.** The virus that causes COVID-19 spreads between people more readily indoors than outdoors. Improving ventilation is a key engineering control that can be used as part of a layered strategy to reduce the concentration of viral particles in indoor air and the risk of virus transmission to unvaccinated and otherwise at-risk workers in particular. A well-maintained ventilation system is particularly important in any indoor workplace setting and when working properly, ventilation is an important control measure to limit the spread of COVID-19. Some measures to improve ventilation are discussed in [CDC's Ventilation in Buildings](#) and in the [OSHA Alert: COVID-19 Guidance on Ventilation in the Workplace](#). These recommendations are based on American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Guidance for [Building Operations](#) and [Industrial Settings](#) during the COVID-19 Pandemic. Adequate ventilation will protect all people in a closed space. Key measures include ensuring heating, ventilation, and air conditioning (HVAC) systems are operating in accordance with the manufacturer's instructions and design specifications, conducting all regularly scheduled inspections and maintenance procedures, maximizing the amount of outside air supplied, installing air filters with a [Minimum Efficiency Reporting Value \(MERV\) 13](#) or higher where feasible, maximizing natural ventilation in buildings without HVAC systems by opening windows or doors, when conditions allow (if that does not pose a safety risk), and considering the use of portable air

cleaners with High Efficiency Particulate Air (HEPA) filters in spaces with high occupancy or limited ventilation.

8. **Perform routine cleaning and disinfection.** If someone who has been in the facility within 24 hours is [suspected of having or confirmed to have COVID-19](#), follow the [CDC cleaning and disinfection recommendations](#). Follow requirements in **mandatory OSHA standards 29 CFR 1910.1200 and 1910.132, 133, and 138** for hazard communication and PPE appropriate for exposure to cleaning chemicals.
9. **Record and report COVID-19 infections and deaths:** Under **mandatory OSHA rules in 29 CFR part 1904**, employers are required to record work-related cases of COVID-19 illness on OSHA's [Form 300 logs](#) if the following requirements are met: (1) the case is a confirmed case of COVID-19; (2) the case is [work-related](#) (as defined by [29 CFR 1904.5](#)); and (3) the case involves one or more [relevant recording criteria](#) (set forth in [29 CFR 1904.7](#)) (e.g., medical treatment, days away from work). Employers must follow the requirements in [29 CFR part 1904](#) when [reporting COVID-19 fatalities and hospitalizations to OSHA](#). More information is available [on OSHA's website](#). Employers should also report outbreaks to local health departments as required and support their [contact tracing efforts](#).

In addition, employers should be aware that [Section 11\(c\) of the Act](#) prohibits reprisal or discrimination against an employee for speaking out about unsafe working conditions or reporting an infection or exposure to COVID-19 to an employer. In addition, **mandatory OSHA standard 29 CFR 1904.35(b)** also prohibits discrimination against an employee for reporting a work-related illness.

Note on recording adverse reactions to vaccines: OSHA, like many other federal agencies, is working diligently to encourage COVID-19 vaccinations. OSHA does not want to give any suggestion of discouraging workers from receiving COVID-19 vaccination or to disincentivize employers' vaccination efforts. As a result, OSHA will not enforce 29 CFR part 1904's recording requirements to require any employers to record worker side effects from COVID-19 vaccination at least through May 2022. OSHA will reevaluate the agency's position at that time to determine the best course of action moving forward. Individuals may choose to submit adverse reactions to the federal [Vaccine Adverse Event Reporting System](#).

10. **Implement protections from retaliation and set up an anonymous process for workers to voice concerns about COVID-19-related hazards:** [Section 11\(c\) of the OSH Act](#) prohibits discharging or in any other way discriminating against an employee for engaging in various occupational safety and health activities. Examples of violations of Section 11(c) could include discriminating against employees for raising a reasonable concern about infection control related to COVID-19 to the employer, the employer's agent, other employees, a government agency, or to the public, such as through print, online, social, or any other media; or against an employee for voluntarily providing and safely wearing their own PPE, such as a respirator, face shield, gloves, or surgical mask.

In addition to notifying workers of their rights to a safe and healthful work environment, ensure that workers know whom to contact with questions or concerns about workplace safety and health, and that there are prohibitions against retaliation for raising workplace safety and health concerns or engaging in other protected occupational safety and health activities (see [educating and training workers about COVID-19 policies and procedures](#), above); also consider using a hotline or other method for workers to voice concerns anonymously.

11. **Follow other applicable mandatory OSHA standards:** All of OSHA's standards that apply to protecting workers from infection remain in place. These **mandatory OSHA standards** include: requirements for PPE (29 CFR part 1910, Subpart I

(e.g., [1910.132](#) and [133](#))), respiratory protection ([29 CFR 1910.134](#)), sanitation ([29 CFR 1910.141](#)), protection from bloodborne pathogens: ([29 CFR 1910.1030](#)), and OSHA's requirements for employee access to medical and exposure records ([29 CFR 1910.1020](#)). Many healthcare workplaces will be covered by the **mandatory OSHA COVID-19 Emergency Temporary Standard**. More information on that standard is available on [OSHA's website](#). Employers are also required by the General Duty Clause, [Section 5\(a\)\(1\)](#) of the OSH Act, to provide a safe and healthful workplace free from recognized hazards that are causing or likely to cause death or serious physical harm.

Appendix: Measures Appropriate for Higher-Risk Workplaces with Mixed-Vaccination Status Workers

Employers should take additional steps to mitigate the spread of COVID-19 among unvaccinated or otherwise at-risk workers due to the following types of workplace environmental factors, especially in locations of substantial or high transmission:

- **Close contact**— where unvaccinated and otherwise at-risk workers are working close to one another, for example, on production or assembly lines or in busy retail settings. Such workers may also be near one another at other times, such as when clocking in or out, during breaks, or in locker/changing rooms.
- **Duration of contact** – where unvaccinated and otherwise at-risk workers often have prolonged closeness to coworkers (e.g., for 6–12 hours per shift). Continued contact with potentially infectious individuals increases the risk of SARS-CoV-2 transmission.
- **Type of contact** – where unvaccinated and otherwise at-risk workers may be exposed to the infectious virus through respiratory particles in the air—for example, when infected workers in a manufacturing or factory setting cough or sneeze, especially in poorly ventilated spaces. Confined spaces without adequate ventilation increase the risk of viral exposure and transmission. It is also possible, although less likely, that exposure could occur from contact with contaminated surfaces or objects, such as tools, workstations, or break room tables. Shared closed spaces such as break rooms, locker rooms, and interior hallways in the facility may contribute to risk.
- **Other distinctive factors that may increase risk among unvaccinated or otherwise at-risk workers include:**
 - A common practice at some workplaces of sharing employer-provided transportation such as ride-share vans or shuttle vehicles;
 - Frequent contact with other individuals in community settings, especially in areas where there is substantial or high community transmission; and
 - Communal housing or living quarters onboard vessels with other unvaccinated or otherwise at-risk individuals.

In these types of higher-risk workplaces – which include manufacturing; meat, seafood, and poultry processing; high-volume retail and grocery; and agricultural processing settings – this Appendix provides best practices to protect unvaccinated and otherwise at-risk workers. Please note that these recommendations are *in addition to* those in the general precautions described above, including isolation of infected or possibly infected workers, and other precautions.

In all workplaces with heightened risk due to workplace environmental factors where there are unvaccinated or otherwise at-risk workers in the workplace:

- Stagger break times in these generally high-population workplaces, or provide temporary break areas and restrooms to avoid groups of unvaccinated or otherwise at-risk workers

congregating during breaks. Such workers should maintain at least 6 feet of distance from others at all times, including on breaks.

- Stagger workers' arrival and departure times to avoid congregations of unvaccinated or otherwise at-risk workers in parking areas, locker rooms, and near time clocks.
- Provide visual cues (e.g., floor markings, signs) as a reminder to maintain physical distancing.
- Require unvaccinated or otherwise at-risk workers, and also fully vaccinated workers in areas of substantial or high community transmission, to wear masks whenever possible, encourage and consider requiring customers and other visitors to do the same.
- Implement strategies (tailored to your workplace) to improve ventilation that protects workers as outlined in [CDC's Ventilation in Buildings](#) and in the [OSHA Alert: COVID-19 Guidance on Ventilation in the Workplace](#), and ASHRAE Guidance for [Building Operations](#) and [Industrial Settings](#) During the COVID-19 Pandemic.

In high-volume retail workplaces (or well-defined work areas within retail workplaces) where there are unvaccinated or otherwise at-risk workers, customers, or other people:

- Ask customers and other visitors to wear masks—or consider requiring them—especially in areas of substantial or high transmission.
- Consider ways to promote physical distancing between unvaccinated or otherwise at-risk people and/or limiting occupancy to allow for physical distancing consistent with CDC guidance.
- Move the electronic payment terminal/credit card reader farther away from unvaccinated and otherwise at-risk workers in order to increase the distance between customers and such workers, if possible.
- Adjust stocking activities to limit contact between unvaccinated and otherwise at-risk workers and customers.

Unvaccinated or otherwise at-risk workers are also at risk when traveling to and from work in employer-provided buses and vans.

- Notify unvaccinated and otherwise at-risk workers of this risk and, to the extent feasible, help them limit the number of such workers in one vehicle.
- Make sure all unvaccinated and otherwise at-risk workers sharing a vehicle are wearing appropriate face coverings. Make sure all workers wear appropriate face coverings in areas of substantial or high community transmission.
- Where not prohibited by weather conditions, open vehicle windows.

In meat, poultry, and seafood processing settings; manufacturing facilities; and assembly line operations (including in agriculture) involving unvaccinated and otherwise at-risk workers:

- Ensure adequate ventilation in the facility, or if feasible, move work outdoors.
- Space such workers out, ideally at least 6 feet apart, and ensure that such workers are not working directly across from one another. Barriers are not a replacement for worker use of face coverings and physical distancing.
- If barriers are used where physical distancing cannot be maintained, they should be made of a solid, impermeable material, like plastic or acrylic, that can be easily cleaned or replaced. Barriers should block face-to-face pathways and should not flap or otherwise move out of position when they are being used.
- Barriers do not replace the need for physical distancing – at least six feet of separation should be maintained between unvaccinated and otherwise at-risk individuals whenever possible.

INJURY & ILLNESS PREVENTION PROGRAM

List of Appendices

1. Subcontractor Safety Program Review & Agreement
Subcontractor Tailgate Topic for New Site
2. Superintendents Safety Planning for New Site
3. Employee Safety & Health Agreement
4. Emergency Preparedness Plan
5. Emergency Telephone Numbers Notice – Arizona/OSHA
6. Jobsite Safety Checklist – Short Form
7. Safety Alert/Special Safety Precautions Instruction
8. Safety Notice to Construction Site Visitors
9. Jobsite Safety Notice & Warning Signs
10. Trenching & Excavation Safety Checklist
11. Scaffolding & Platforms Guidelines/Inspection
12. Hazcom/SDS Worksheet
13. List of Potentially Hazardous Materials
14. Safety Meeting Agenda
15. Safety Meeting Minutes
16. Safety Training Session Record
17. PPE Ownership Form
18. List of Company Personnel with First Aid/CPR Training
19. Employer Safety Training Record
20. Employee Safety Training Record
21. List of Tailgate Topics
22. Hazard Assessment & Correction Record
23. Fall Protection Plan
24. Fire Extinguisher Protection
25. ForkLift/Construction Vehicle Guidelines/Inspection
26. Lock Out/Tag Out System Procedure
27. Notification of Hazardous Act or Condition
28. Accident Prevention Advisory
29. Safety Performance Review/Reward & Discipline Procedure
30. Accident Investigation
31. Light Duty/Modified Duty
32. Certificate of Safety Training
33. Insurance Company Form – First Report of an Accident
34. Safety Suggestion Form
35. OSHA Form 300
36. Safety Recognition Award
40. Accident Investigation - Document Request Sheet
41. Trade Contractor Safety – Program Compliance Declarations
42. Confined Space
43. Silica Exposure Control Plan - Sample



CONTRACTOR SAFETY PROGRAM REVIEW/CHECKLIST

TRADE CONTRACTOR: _____

CONSTRUCTION SITE: _____ DATE: _____

SUB-CONTRACTOR REP: _____

name *title* *signature*

	Yes	No
1. Company Written Workplace Safety Program – reviewed by sub-contractor.	☐	☐
2. Sub-Contractor Written Workplace Safety Program available & kept on jobsite. (This Written Workplace Safety Program meets or exceeds all Federal & State requirements).	☐	☐
3. Is Sub-Contractor fully aware of their responsibilities for their own employee's health & safety, safe workplace, safe work practices and regular safety meetings?	☐	☐
4. All reportable injuries, illnesses and accidents to be promptly notified to Site Superintendent at the first available opportunity – in writing.	☐	☐
5. SDS's pertaining to all chemicals, which anyone on the jobsite might be exposed?	☐	☐
6. Fire extinguishers, first aid kit and trained first aid responder whereabouts known?	☐	☐
7. Fall protection provisions known and understood.	☐	☐
8. Personal Protective Equipment is available as necessary.	☐	☐
9. Site Specific Safety Hazards established and discussed (e.g. Terrain, etc.)	☐	☐
10. DOSH permits for trenching and/or scaffolding obtained prior to commencement and copies available for site superintendent inspection.	☐	☐
11. General Site Safety Provisions reviewed. Vehicle Speed Limits, alcohol/drugs policy, no children, no animals, housekeeping & daily cleanups, removal of waste materials.	☐	☐
12. A written notice of any observed unsafe acts or conditions may be issued to sub-contractors. (Repeat occurrences are not tolerated and provide grounds for termination of contract).	☐	☐
13. Subcontractor will correct any unsafe or unhealthy conditions that they are responsible for.	☐	☐
14. Subcontractor will conduct monthly project safety meetings and regular tailgate topics for all their people that are relevant to their particular trade and working conditions.	☐	☐



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www.TailgateTalks.com

Filling Instructions: Copies of this "Tailgate Talk" should be filed in employer's safety training records. This is intended as a guide only- all rights reserved.

Company Name: _____ Dept: _____ Location: _____ Date: _____

#072

FIRST DAY – SAFETY ORIENTATION FOR TRADE CONTRACTOR SITE FOREMEN

Construction is a "high-hazard" industry and leads all others in injuries and accidents. Each employer must provide a safe and healthful workplace for all of his or her employees at all times. We rely on you, and your expertise in your particular trade, to know the safe way to do the job. As such, your company has been contracted to work safely on this jobsite at all times and to report any hazardous conditions that you may come across, immediately. All injury/accidents should be reported to the site superintendent as soon as reasonably possible. Injury & Illness Prevention is part of your contract and you have the authority and responsibility for controlling the safety of all of the people working for you while they are on this jobsite.

Each of your crew should be aware of your Written Workplace Safety Program and should have received "Codes of Safety Practices" and advice and training on how to work safely. They need to know what equipment they are authorized to use. They need to know, they have a right to know, about hazardous chemicals. Are there any on the site? Where are they stored? Will they be required to work with or around any of these? Where can they find a copy of a Safety Data Sheet (SDS) if they need one? What about personal protective equipment; are they informed about the need to wear hard hats and suitable protective footwear? Does the job have special fall protection rules that they need to know? Are they prepared for an emergency? Are there fire extinguishers available and where are they? What is the plan if there is a fire? What happens if they have an accident? Who will provide first-aid? Where do they go for treatment?

Another important subject is "housekeeping". Good housekeeping prevents accidents and fires, and creates an efficient work place. Everyone needs to work on housekeeping on a continuous, day-to-day basis. Don't let it become a job that gets done "when there's a spare moment". Remove or bend over nails and deposit all trash and scrap in the proper containers.

Many activities on a construction site require a competent person. Activities that require a competent person include, but are not limited to, excavating, trenching, entering confined spaces, using scaffolds, fall protection and some electrical work. The competent person is there to provide safety advice in these areas. Life and health may depend on them getting the correct advice.

Meeting Conducted By: _____

Print Name

Signature

Presented To:

Trade Contractor

Company

Signature

Other Employees/Contractors

Signature

FRAMER

DRYWALLER

ROOFER

SEWER/WATER

LATH & PLASTER

PLUMBING

FINISH CARP

CABINETS

PAINTING

ELECTRICAL

OTHER

OTHER

OTHER

OTHER

OTHER

OTHER

OTHER

OTHER

OTHER

OTHER



SUPERINTENDENT SAFETY PLANNING FOR NEW SITE

CONSTRUCTION SITE: _____ DATE: _____

SITE SUPERINTENDENT: _____
name
title
signature

- | | Yes | No |
|--|--------------------------|--------------------------|
| 1. Company Health & Safety Program – Onsite & Current. | ☐ | ☐ |
| 2. Subcontractors briefed about their Safety Policies & Procedures responsibilities. | ☐ | ☐ |
| 3. Emergency Services & Contracts Schedule filled out. | ☐ | ☐ |
| 4. Personal Protective Equipment available? Safety Glasses, gloves, work boots, ear protectors, hard hats, fall protection equipment, traffic visibility vests as necessary. | ☐ | ☐ |
| 5. All warning signs available? Portable Water, Site Visitors, Alcohol & Drugs, Vehicle Speed Limits, etc. | ☐ | ☐ |
| 6. Medical, Fire, Police Emergency Services numbers & nearest hospital location available? | ☐ | ☐ |
| 7. Fire extinguishers, first aid kit and trained first aid responder whereabouts known? | ☐ | ☐ |
| 8. Employment Notices & State, Provincial Safety Notices Posted? | ☐ | ☐ |
| 9. Site Specific Safety Hazards established and discussed (e.g. Terrain, etc.) | ☐ | ☐ |
| 10. Permits for trenching and/or scaffolding obtained prior to commencement and copies for site superintendent. | ☐ | ☐ |
| 11. Toilets and other sanitary arrangements made. | ☐ | ☐ |
| 12. Hazardous Materials arrangements made? Combustible & Flammable materials storage. | ☐ | ☐ |
| 13. Monthly project safety meetings and weekly tailgate topics will be conducted. These meetings will normally be held on _____ | ☐ | ☐ |



EMPLOYEE SAFETY & HEALTH AGREEMENT

LOCATION: _____

Our company wants to provide a safe and healthy environment for all of our employees. We are obliged to comply with all federal and state safety and health requirements and for us to do so we depend on each employee to work safely and healthfully. Therefore we ask each employee to read and sign this agreement:

I agree that a safe and healthy work environment is equally beneficial to my employer and me. I understand that I must fulfill my obligations in this regard and agree to the following standards.

- I do not have to work on any job or at any jobsite that is unsafe or unhealthy.
- I understand and apply the general and specific safety standards of this industry and of my company. I understand that I am paid to work safely and I am in a fit condition to do so.
- I will communicate with my supervisor any hazards and/or hazardous working conditions that I cannot correct during the course of my work duties.
- I will keep myself trained and up-to-date with the health and safety requirements, safe work practices, policies and procedures of this company and my job.
- I have reviewed and understand the WWSP programs and when in any doubt, I will refer to my supervisor or to the company safety manual which is available at this location.
- I have reviewed and understand the applicable codes of safe practices and when in any doubt, I will refer to my supervisor or to the company safety manual where they are kept.

NAME: _____ SIGNATURE: _____ DATE: _____

NAME: _____ SIGNATURE: _____ DATE: _____

NAME: _____ SIGNATURE: _____ DATE: _____

NAME: _____ SIGNATURE: _____ DATE: _____

NAME: _____ SIGNATURE: _____ DATE: _____



EMERGENCY PREPAREDNESS PLAN & COMMUNICATION CHECKLIST

COMPANY: _____

LOCATION: _____ DATE: _____

In case of an accident, fire, release, or threatened release of a hazardous material - Individuals responsible for calling Fire, Paramedics, and/or Police:

EMERGENCY RESPONDER NAME

SIGNATURE

ALTERNATE RESPONDER NAME

SIGNATURE

For Hazard Material Release (and/or threatened release) phone Local Administering Agency & Office of Emergency Services: _____

LOCAL HOSPITAL/CLINIC:

PREVENTION: In addition to Safety Training Sessions and regular onsite Tailgate Talks, all contractors are urged to store their hazardous/flammable materials safely in the correct storage receptacles and inside metal storage containers when not in use.

MITIGATION: The immediate response to a spill, fire, explosion or airborne release at the jobsite is to evacuate all non-emergency response personnel and to notify emergency responders listed above. Periodic training is given to the emergency responders in order for them to be able to evaluate the danger and promptly enlist appropriate help.

ABATEMENT: In order to stop the release, clean up and dispose of released materials. Evaluate the extent of the hazard and then notify the correct authorities, agencies, consultants, and/or hazardous waste removal experts.

EVACUATION: In the event of the need to evacuate the jobsite, communicate with trade contractors' foremen and tour the jobsite shouting to all personnel in the vicinity to evacuate.



EMERGENCY PHONE NUMBERS FOR

(Please Give Exact Address of This Worksite Location)

Physicians: _____

Hospitals: _____

Ambulances: 911 or _____

Fire Department: 911 or _____

Police: 911 or _____



DATE: _____

JOBSITE SAFETY CHECKLIST

COMPANY NAME:		DIVISION:	
CONSTRUCTION SITE:		PHONE #:	

MANAGER/SUPER: _____

<i>Name</i>	<i>Title</i>	<i>Signature</i>
-------------	--------------	------------------

GENERAL

	5	4	3	2	1	0	N/A	Comments
Safety Program Manual effectively maintained	☐	☐	☐	☐	☐	☐	☐	_____
Trailer clean & organized	☐	☐	☐	☐	☐	☐	☐	_____
Hazcom/SDS available & containers labeled	☐	☐	☐	☐	☐	☐	☐	_____
Codes of Safe Practices conspicuously posted	☐	☐	☐	☐	☐	☐	☐	_____
Traffic Management Plan	☐	☐	☐	☐	☐	☐	☐	_____
Appendix 27 being used	☐	☐	☐	☐	☐	☐	☐	_____
Back Safety, Lifting, Carrying OK	☐	☐	☐	☐	☐	☐	☐	_____
Jobsite signage at trailer/gate OK	☐	☐	☐	☐	☐	☐	☐	_____
Jobsite postings (OSHA, State, Company, Permit)	☐	☐	☐	☐	☐	☐	☐	_____

HOUSEKEEPING & SANITATION

Eating areas clean & sanitary	☐	☐	☐	☐	☐	☐	☐	_____
Washing Facilities as necessary	☐	☐	☐	☐	☐	☐	☐	_____
Adequate water supply	☐	☐	☐	☐	☐	☐	☐	_____
Protruding nails bent over or removed	☐	☐	☐	☐	☐	☐	☐	_____
Adequate lighting	☐	☐	☐	☐	☐	☐	☐	_____
Passageways/Walkways clear	☐	☐	☐	☐	☐	☐	☐	_____
Lumber kicked out/Regular disposal of trash	☐	☐	☐	☐	☐	☐	☐	_____
Work areas neat & clean	☐	☐	☐	☐	☐	☐	☐	_____
Toilet facilities adequate & clean	☐	☐	☐	☐	☐	☐	☐	_____

FIRE PREVENTION

Fire extinguishers identified/checked	☐	☐	☐	☐	☐	☐	☐	_____
Written Fire Prevention Plan	☐	☐	☐	☐	☐	☐	☐	_____
Hydrants have clear access & energized	☐	☐	☐	☐	☐	☐	☐	_____
Public thoroughfares open/Materials stored OK	☐	☐	☐	☐	☐	☐	☐	_____

TOOLS & EQUIPMENT

Personal Protective Equipment supplied OK	☐	☐	☐	☐	☐	☐	☐	_____
Proper tool being used for each job	☐	☐	☐	☐	☐	☐	☐	_____
Damaged tools/cords promptly repaired	☐	☐	☐	☐	☐	☐	☐	_____
Assured grounding/GFCI's	☐	☐	☐	☐	☐	☐	☐	_____
Mechanical safeguards in place	☐	☐	☐	☐	☐	☐	☐	_____
Safety goggles/shields being used	☐	☐	☐	☐	☐	☐	☐	_____



	5	4	3	2	1	0	N/A	Comments
FALLS – LADDERS								
Job-built ladders constructed properly	☐	☐	☐	☐	☐	☐	☐	
Clear of electrical hazards	☐	☐	☐	☐	☐	☐	☐	
In good condition	☐	☐	☐	☐	☐	☐	☐	
Ladders used properly	☐	☐	☐	☐	☐	☐	☐	
FALLS – SCAFFOLDING								
Inspected & in good condition	☐	☐	☐	☐	☐	☐	☐	
Guardrails/access ladders in place	☐	☐	☐	☐	☐	☐	☐	
Properly secured & clear of electrical hazards	☐	☐	☐	☐	☐	☐	☐	
Mudsills, Base Plates, & Planking OK	☐	☐	☐	☐	☐	☐	☐	
FALLS – GUARDRAILS & STAIR RAILS								
Installed as required around openings/surfaces	☐	☐	☐	☐	☐	☐	☐	
Properly built, installed	☐	☐	☐	☐	☐	☐	☐	
FALLS – ROOF & STRUCTURES								
Fall protection equipment being used	☐	☐	☐	☐	☐	☐	☐	
IMPALEMENT PROTECTION								
Exposed rebar properly guarded/covered	☐	☐	☐	☐	☐	☐	☐	
VEHICLES								
Personnel carried in a safe manner, safety belts	☐	☐	☐	☐	☐	☐	☐	
Vehicles operated by qualified workers	☐	☐	☐	☐	☐	☐	☐	
Vehicles lights & warning signal operative	☐	☐	☐	☐	☐	☐	☐	
Vehicles in good condition, ROPS OK	☐	☐	☐	☐	☐	☐	☐	
MATERIALS STORAGE & HANDLING								
Loads being properly lifted	☐	☐	☐	☐	☐	☐	☐	
Materials stored properly	☐	☐	☐	☐	☐	☐	☐	
Materials stacks not too high, on firm footing	☐	☐	☐	☐	☐	☐	☐	
Spill Kit available	☐	☐	☐	☐	☐	☐	☐	
EXCAVATING & SHORING								
Shoring/sheeting used when necessary	☐	☐	☐	☐	☐	☐	☐	
Spoil pile 3 feet from edge	☐	☐	☐	☐	☐	☐	☐	
Equipment a safe distance away from trench	☐	☐	☐	☐	☐	☐	☐	
EMERGENCY PREPAREDNESS								
Emergency telephone numbers & plans posted	☐	☐	☐	☐	☐	☐	☐	
Emergency vehicle access clear	☐	☐	☐	☐	☐	☐	☐	
Heat Illness Prevention Program up-to-date	☐	☐	☐	☐	☐	☐	☐	
First Aid providers & supplies on site	☐	☐	☐	☐	☐	☐	☐	
Disaster Recovery Plan	☐	☐	☐	☐	☐	☐	☐	
TOTAL MARKS								

Note: Total Possible Marks 280 – Total N/A = Inspection Total Marks

General Comments:

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SAFETY ALERT SPECIAL SAFETY PRECAUTIONS INSTRUCTION

CONSTRUCTION SITE: _____ DATE: _____

SITE SUPERINTENDENT: _____
name title signature

TO: _____ COPIES TO: _____

FROM: _____

JOB LOCATION: _____

OBJECTIVE: _____

SPECIAL SAFETY PRECAUTIONS NEEDED:

WHY NEEDED: _____

SPECIAL EQUIPMENT NEEDED: _____

PERSONAL PROTECTIVE EQUIPMENT NEEDED: _____

This form should be issued whenever extreme circumstances demand extra care and pre-planning of a particular assignment. Conditions such as extreme weather, unusual weight or site instability are better planned carefully in advance. These non-routine tasks and associated hazards should not be rushed ~ advance warning and timely planning will help ensure job safety.



SAFETY NOTICE TO CONSTRUCTION SITE VISITORS: CONSTRUCTION IS A HIGH HAZARD INDUSTRY

WE WANT YOU TO ENJOY YOUR HOME BUYING EXPERIENCE AND RESPECTFULLY DRAW YOUR ATTENTION TO THE FACT THAT CONSTRUCTION SITES CAN BE VERY HAZARDOUS.

VISITORS AND MEMBERS OF THE GENERAL PUBLIC SHOULD EXERCISE EXTREME CAUTION AT ALL TIMES. WE STRONGLY ADVISE THAT ALL SITE VISITS SHOULD BE BY APPOINTMENT AND ACCOMPANIED BY A SITE SUPERINTENDENT OR COMPANY REPRESENTATIVE WHENEVER POSSIBLE.

THERE ARE VARIOUS SITE HAZARDS THAT ARE OF PARTICULAR IMPORTANCE INCLUDING BUT NOT LIMITED TO:

- › ROUGH AND UNEVEN GROUND, SHARP GRADIENTS
- › PROTRUDING NAILS, LOOSE MATERIALS AND SHARP OBJECTS
- › POTHOLES, TRENCHES, FLOOR OPENINGS
- › HAZARDOUS MATERIALS
- › DANGEROUS VEHICLES, MACHINERY & EQUIPMENT
- › FALLING OBJECTS
- › TEMPORARY POWER LINES
- › WET, SLIPPERY AREAS

PLEASE TAKE GREAT CARE DURING YOUR VISIT AND AVOID ACCIDENTS



JOBSITE SAFETY NOTICE & WARNING SIGN

WARNING

DANGER – *KEEP OUT* HAZARDOUS CONSTRUCTION SITE

NO TRESPASSING

ONLY AUTHORIZED WORKERS & VEHICLES BEYOND THIS POINT
ALL VISITORS REPORT ***DIRECTLY*** TO SUPERINTENDENT'S TRAILER
TRADE CONTRACTORS MUST REPORT TO SUPERINTENDENT WITH ALL
NECESSARY PERMITS BEFORE PROJECT ACTIVITY COMMENCES

JOBSITE RULES:

OBEY ALL SAFETY RULES
NO ALCOHOL OR DRUGS ON JOBSITE
NO LOUD MUSIC – NO EARPHONES
PERSONAL PROTECTIVE EQUIPMENT TO BE USED AT ALL TIMES AS NECESSARY
SAFETY DATA SHEETS (SDS's) FOR ALL HAZARDOUS MATERIALS USED ON SITE
SHOULD BE COMMUNICATED TO SITE-SUPERINTENDENT
CONSTRUCTION EQUIPMENT TO BE MAINTAINED TO OSHA STANDARDS

FIRE, FIRST AID & EMERGENCIES:

FIRST-AID, EMERGENCY EQUIPMENT & INFORMATION AVAILABLE IN TRAILER
SITE-SUPERINTENDENT SHOULD BE NOTIFIED OF ALL SERIOUS ACCIDENTS



DATE: _____

TRENCHING & EXCAVATION SAFETY CHECKLIST

COMPANY NAME:		DIVISION:	
CONSTRUCTION SITE:		PHONE #:	

MANAGER/SUPER: _____

<i>Name</i>	<i>Title</i>	<i>Signature</i>
-------------	--------------	------------------

PRE-EXCAVATION

- › All underground installations located; sewer, water, gas, electric, telecoms
- › All surface obstacles removed; structures, trees, boulders, etc.
- › Trenching/excavation permit for excavation over 5 feet or notice sent to DOSH
- › Are dangerous conditions present that require expert opinion
- › Are safe crossings provided by bridges where necessary when depth over 7.5 feet
- › Are standard toeboards and railings included
- › In the case of external vibrations e.g. railroads, are special securing provisions made
- › In the case of previous excavation work, are special securing provisions made

YES NO

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

DURING EXCAVATIONS

- › If over 5' deep, are workers entering excavation protected by shoring, sloping, etc.
- › If less than 5' deep, is all excavated material placed at least 1 foot from edge
- › If over 5' deep, is all excavated material placed at least 2 feet from edge
- › Has the soil round the edge of excavation been left undisturbed
- › Have heavy vehicles kept away from edges of excavation
- › Are workers in the vicinity of excavating equipment restrained from working when the possibility exists for them to fall into contact with the machines moving parts
- › All factors such as sidewalks, roadways, walls, foundations undermined by the excavation are supported, boarded, shored and guarded from endangering workers, property or third parties and under qualified supervision and daily inspection
- › No existing structure will be used to retain soil or backfill unless determined OK
- › Barriers will prevent mobile equipment and/or people from falling into excavation
- › All wells, pits, and shafts are securely barricaded or covered and are backfilled after
- › Surface water is prevented from accumulating near or entering the excavation

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

WORKING WITH EXCAVATIONS

- › Are excavations inspected after events which could increase instability (e.g. rain)
- › Is work in excavation supervised by qualified authorities who can order increased protection in the event it becomes necessary

☐	☐
☐	☐



- | | | |
|--|--------------------------|--------------------------|
| ‣ Has protection against sides and cave-ins increased whenever necessary, especially before workers enter the excavation | ☐ | ☐ |
| ‣ Are ramps or ladders provided for ease of entry and exit from excavation | ☐ | ☐ |
| ‣ Are all shoring materials sound, designed to sustain anticipated loads and provide safe conditions for all workers during installation | ☐ | ☐ |
| ‣ All excavations over 20 feet deep and/or using hybrid materials designed by a certified civil engineer and plans available at the site | ☐ | ☐ |
| ‣ Employees are trained and Codes of Safe Practices adjusted for any unusual standards or conditions | ☐ | ☐ |
| ‣ In all cases of excavation over 5 feet deep, when shoring is not being used, is sloping or benching applied to prevent sliding, cave-ins or falling of earth | ☐ | ☐ |

CLOSING UP EXCAVATIONS

- | | | |
|--|--------------------------|--------------------------|
| ‣ Shoring system is removed so that it does not expose workers to moving ground | ☐ | ☐ |
| ‣ Newly constructed concrete or masonry walls are not depended on to retain soil until they have reached adequate strength | ☐ | ☐ |
| ‣ All workers are clear of excavations, holes & trenches when backfilling commences | ☐ | ☐ |

UNSAFE ACTS AND/OR CONDITIONS OBSERVED:

Inspector's Signature

Date

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SCAFFOLDS & PLATFORMS

CONSTRUCTION SITE: _____ DATE: _____

SITE SUPERINTENDENT: _____
name title signature

All scaffolds, whether fabricated on site, purchased, or rented must conform to the specifications found in 29 CFR, 1926 Subpart L – Scaffolds.

▪ 1926.450 - Scope, application and definitions applicable to this subpart.	Yes ☐ No ☐
▪ 1926.451 - General requirements.	Yes ☐ No ☐
▪ 1926.452 - Additional requirements applicable to specific types of scaffolds.	Yes ☐ No ☐
▪ 1926.453 - Aerial lifts.	Yes ☐ No ☐
▪ 1926.454 - Training requirements.	Yes ☐ No ☐
▪ 1926 Subpart L App A - Scaffold Specifications	Yes ☐ No ☐
▪ 1926 Subpart L App B - Criteria for Determining the Feasibility of Providing Safe Access and Fall Protection for Scaffold Erectors and Dismantlers	Yes ☐ No ☐
▪ 1926 Subpart L App C - List of National Consensus Standards.	Yes ☐ No ☐
▪ 1926 Subpart L App D - List of Training Topics for Scaffold Erectors and Dismantlers.	Yes ☐ No ☐
▪ 1926 Subpart L App E - Drawings and Illustrations.	Yes ☐ No ☐



SDS WORKSHEET

In evaluating the health and hazards associated with chemicals in the workplace, determinations shall be reviewed as objectively as possible. Health hazard definitions and analysis are, by nature, less precise and more subjective. Employees exposed to chemicals with associated health hazards shall be evaluated on the basis of objective information furnished by SDS's (Safety Data Sheets) and technical publications. Health effects shall be further evaluated on the basis of "acute" and "chronic" exposure categorization as defined by ANSI (American National Standards Institute) and OSHA (Occupational Safety and Health Administration) (Z 129.1 – 1982).

For the purpose of hazard analysis, the company shall further evaluate chemicals on the following basis:

Carcinogen	Irritant	Target Organ Effects
Corrosive	Sensitizer	Hepatotoxins
Highly Toxic	Toxic	Nephrotoxins
Neurotoxins	Hematopoietic Toxins	Lung Damaging Agents
Reproductive Toxins	Cutaneous Toxins	Eye Hazards

In the event of mixtures of chemicals, the company shall identify if a particular mixture has been tested and communicate this information to company employees. In the event a chemical mixture has not been previously tested, it shall be assumed that the same health hazards exist for the components, as for the mixture in concentration above 1% by weight or volume. In addition, should evidence indicate a component in a mixture below 1% by weight or volume could be released in concentrations that would exceed OSHA permissible exposure limits, the mixture shall be identified and assumed to present the same health hazard.

► Identity & Manufacturer Information	check
The identity used on label (may be same as chemical/common name)	0
Name, address, and emergency phone number(s)	0
Name of person who prepared the SDS	0
Date SDS was prepared	0
► Hazardous Ingredients/Identify Information	
Hazardous ingredients	0
Chemical names/common names	0



TOXIC & HAZARDOUS SUBSTANCES

PART 1: SUBSTANCES CONSIDERED TOXIC AND HAZARDOUS

The toxic and hazardous substances standard provides different rules for each of the following chemicals to which employees in the construction industry may be exposed:

- 4-Nitrobiphenyl
- alpha-Naphthylamine
- Methyl chloromethyl ether
- 3,3' – Dichlorobenzidine (and it's salts)
- bis-Chloromethyl ether
- beta-Propiolactone
- 2-Acetylaminofluorene
- 4-Dimethylaminoazobenzene
- N-Nitrosodimethylamine
- Vinyl chloride
- inorganic arsenic
- Cadmium
- Benzene
- Coke oven emissions
- 1,2-dibromo-3-chloropropane
- Acrylonitrile
- Ethylene oxide
- Formaldehyde

Separate Requirements For Each Toxic And Hazardous Substance

If your employees are occupationally exposed to any of the above substances, you must meet the requirements in the applicable section of OSHA's Toxic and Hazardous Substance Standard (Subpart Z of Part 1926 of Title 29 of the Code of Federal Regulations; 29 CFR part 1926, §§1100 through 1148). Different requirements are prescribed for each chemical.

As examples of the types of employee protection required for toxic and hazardous substances, this chapter outlines the rules applicable to four of these substances commonly encountered in the construction industry: asbestos, benzene, formaldehyde, and vinyl chloride.



SAFETY COMMITTEE MEETING AGENDA

COMPANY: _____

LOCATION: _____

DATE OF MEETING: _____ TIME: _____ to _____

SAFETY COMMITTEE ROSTER:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

AGENDA ITEM:

1. Call meeting to order
2. Review & approve minutes of last safety committee meeting
3. Review progress on safety committee recommendations
4. Analysis of previous month accidents & near-misses
5. Safety recognition/rewards
6. Safety warnings/discipline
7. Safety suggestions received during past month

8. Any other business: _____

9. Next committee meeting: Place: _____

Date: _____

Time: _____

10. Adjournment



SAFETY COMMITTEE MEETING MINUTES

OF PREVIOUS MEETING HELD ON DATE: _____

COMPANY: _____

LOCATION: _____

DATE OF MEETING: _____ TIME: _____ to _____

SAFETY COMMITTEE ROSTER:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ITEMS DISCUSSED:

1. Meeting was called to order
2. Minutes of last safety committee meeting were reviewed & approved
3. Progress on safety committee recommendations reviewed
Details: _____
4. Previous month accidents & near-misses analyzed
Details: _____
5. Safety recognitions/rewards
Details: _____
6. Safety warnings/discipline
Details: _____
7. Safety suggestions received during past month
Details: _____
8. Other business
Details: _____
9. Next safety committee meeting planned: time & date _____
10. Meeting adjourned at: time _____





Company: _____

SAFETY TRAINING SESSION RECORD**SUBJECT:** _____

Location: _____

Date of Session: _____ Time Started: _____ Time Ended: _____

Trainer's Name and Signature: _____

Those present at training:

<u>PRINT NAME</u>	<u>SIGNATURE</u>	<u>JOB TITLE</u>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____
15. _____	_____	_____



PERSONAL PROTECTIVE EQUIPMENT

EMPLOYEE: _____

COMPANY: _____ **LOCATION:** _____

I, _____ ON THIS DATE, _____
employee signature *print name* *date*

acknowledge receipt of training with regard to the care and use of the following types of personal protective equipment. I understand the need to use such equipment whenever necessary.

		check	comments
1.	Eye Protection	0	
2.	Head Protection	0	
3.	Face Protection	0	
4.	Foot Protection	0	
5.	Hand Protection	0	
6.	Noise Protection	0	
7.	Respiratory	0	
8.	Skin Protection	0	
9.	Electrical Protection	0	
10.	Heat Protection	0	
11.	Other	0	
12.	Other	0	



COMPANY PERSONNEL WITH ADVANCED FIRST AID/CPR TRAINING

Company: _____

Location: _____

<u>NAME</u>	<u>TRAINING RECEIVED</u>	<u>DATE OF TRAINING</u>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____
9. _____	_____	_____
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____
15. _____	_____	_____



EMPLOYER SAFETY TRAINING RECORD

The company will utilize the following form to identify the type of training, frequency of training, and provider of training. The Safety Administrator is responsible for filling out this form.

THE FOLLOWING TYPES OF TRAINING ARE PROVIDED TO EMPLOYEES OF COMPANY: _____			
Training Type	Provided By: Name of In-House or Consultant	Provided By: Name of Contractor/ Specialist	Frequency of Training/ Date of Training



Company: _____

EMPLOYEE SAFETY TRAINING RECORD

The company will utilize the following form to record the training, frequency of training, and provider of training to the following company employee:

Name and Title of Employee

THE FOLLOWING SAFETY TRAINING HAS BEEN PROVIDED TO THIS EMPLOYEE			
Training Topic	Provided By: Name of In- Personnel	Provided By: Name of Contractor	Date & Hours of Training



"TAILGATE TALKS" ~ SAFETY MEETING SUBJECTS CONSTRUCTION INDUSTRY

- | | | |
|---|---|--|
| 1. OSHA Introduction | 56. First Day- Safety Orientation | 108. Gasoline |
| 2. Employers Responsibility for Safety | 57. Jobsite Conveyors | 109. Flammable Liquid |
| 3. Employees Responsibility for Safety | 58. Tripping Hazards | 110. Guardrails |
| 4. Head Protection | 59. Safety Signs | 111. Wet Weather |
| 5. Workers Compensation Insurance | 60. Working Safely | 112. Cold Weather |
| 6. General Jobsite Housekeeping | 61. Safety Program | 113. Plumbing/Welding/Cutting |
| 7. Accident Prevention | 62. Respiratory Protective Equipment | 114. Insect Bites & Stings |
| 8. Noise Protection | 63. GFCI'S Fire Prevention | 115. Snake Bites |
| 9. Personal Protective Equipment | 64. Fire Prevention | 116. Animal Bites |
| 10. Safety for New Workers | 65. Portable Fire Extinguishers | 117. Valley Fever |
| 11. Safety for New Workers Part 2 | 66. First Aid on Jobsites | 118. Plants & Trees to Avoid |
| 12. Codes of Safe Practices | 67. Equipment Maintenance | 119. Hazardous Materials/ Waste Disposal |
| 13. Lifting, Moving, Carrying and Loading | 68. Cuts Can Get Infected | 120. Proposition 65 |
| 14. Electrical Safety Orders | 69. Falling Objects (Struck By) | 121. Preventing Strains & Sprains |
| 15. Bloodborne Pathogens | 70. Inhalation Hazards | 122. Material data Safety Sheet |
| 16. What to do in an Emergency | 71. Rigging | 123. Cell Phones & 911 Emergency Calls |
| 17. Ladders | 72. First Day Orientation For Trade Contractor | 124. Laser Hazards |
| 18. Scaffolds | 73. Multi-Employer Job Sites | 125. Eye Hazard & Eye Wash Facilities |
| 19. Fall Protection | 74. Back Injuries - Lifting Objects | 126. Competent Persons Trade Contractor Requirements |
| 20. First Aid Supplies | 75. Sprains & Strains | 127. The Importance of First Aid & CPR |
| 21. Emergency Medical Services | 76. Working on Remote Jobsites | 128. The Importance of Safety Training Sessions |
| 22. Water Supply on Construction Sites | 77. Fall Protection Plans | 129. N/A |
| 23. Eye and Face Protection | 78. Confined Spaces | 130. West Nile Virus |
| 24. Hand Tools | 79. Demolition | 131. Back-Up Alarms, Haulage & Earth Moving Vehicles |
| 25. Portable Power Tools | 80. Heavy Motor Vehicles Safety | 132. Illumination |
| 26. Floor and Wall Openings | 81. Uncontrolled Sources of Energy- Lockout/Tag out | 133. Short Cuts |
| 27. Stairs and Stairways | 82. Eye Hazards & Eye Wash Facilities | 134. Accidents Do Happen |
| 28. Machine Guarding | 83. Jobsite Fire Hazards & Material Storage | 135. Noise & Hearing |
| 29. Lockout Blockout | 84. State List of OSHA Citations | 136. Lead |
| 30. Compressors | 85. Scaffold Plank Condition | 137. Smoking in the Workplace |
| 31. Fire Protection | 86. Skin Care & Sunny Weather | 138. Model Home Sales |
| 32. Hazardous Substance Communication | 87. Job Made Ladders | 139. Ergonomics |
| 33. Exiting or Egress | 88. Ladder Angles | 140. Evacuation Procedures |
| 34. Industrial Trucks-Forklifts | 89. Nail Guns & Staplers | 141. VDT Eye Strain |
| 35. Drug-Free Jobsites | 90. Elevating Employees with Lift Trucks | 142. OSHA Federal Workplace Posters |
| 36. Safety Awareness | 91. Operating Rules for Lift Trucks | 143. Crystalline Silica |
| 37. Wellness/Fitness | 92. Chain Saws | 144. Asbestos |
| 38. Trenching & Excavation | 93. Heat Exposure | 145. Working Outdoors |
| 39. Welding, Cutting & Brazing | 94. Heat Disorders | 150. West Nile Virus |
| 40. Confined Spaces | 95. Preventing Heat Stress | 151. Preventing Strains & Sprains |
| 41. Jobsite Safety Inspections | 96. OSHA Tips to Beat Workplace Heat | 152. Practice Good Housekeeping |
| 42. Slips, Trips and Falls | 97. Nails Can Nail You | 153. Preventing CTD's |
| 43. Immediate Corrective Action | 98. Diamond Lath – A Razor Edge | |
| 44. Exercise | 99. Burns & Scalds | |
| 45. Hand Protection | 100. Floor Openings & Holes | |
| 46. Spraying Operations | 101. Reinforcing Steel | |
| 47. Asbestos Hazards | 102. Severe Weather | |
| 48. Foot Protection | 103. Holiday Safety | |
| 49. Accident & Injury Reporting | 104. Prohibited Types of Scaffolds- Drywallers & Stilts | |
| 50. Defensive Driving | 105. Most Often Cited OSHA Violations | |
| 51. Concrete | 106. Power Lines, Temporary & Permanent | |
| 52. Electrical Grounding | 107. Powder Activated Tools | |
| 53. Portable Heating Devices | | |
| 54. Permits | | |
| 55. Gas Cylinders – The Do's & Don'ts | | |



HAZARD ASSESSMENT & CORRECTION RECORD	
DATE:	TIME:
LOCATION OF HAZARD:	
DESCRIPTION OF HAZARD:	
WERE EMPLOYEES INVOLVED? ☐ YES ☐ NO IF SO, PLEASE LIST NAMES.	
1.	2.
3.	4.
5.	6.
DESCRIBE WAYS TO ABATE THE HAZARD:	
REPORT PREPARED BY:	
DATE:	TIME:
REPORT SUBMITTED TO:	
SOLUTION:	
HAZARD ABATED:	



DATE: _____

FALL PROTECTION PLAN – HOME BUILDING

TRADE CONTRACTOR:			
CONSTRUCTION SITE:		PHONE #:	

FOREMAN/MANAGER: _____

<i>Name</i>	<i>Title</i>	<i>Signature</i>
-------------	--------------	------------------

PRE-PLANNING & COMMENCEMENT

- › Has contents of the plan been reviewed with all employees before commencement
- › All employees are adequately trained to perform the specific tasks
- › Controlled Access Zone (CAZ) marked with signs and/or control lines
- › Is CAZ effectively controlled
- › Have employees any concerns – do they feel exposed to greater hazard
- › Work operations observed and safe work practices & procedures enforced
- › Stage material for operations to allow easy access for the employees
- › Safety Administrator should monitor operations while roof work is performed

YES NO

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

QUALIFIED PLAN PREPARER

- › Prepared plan
- › Approves all changes to the plan
- › Reviews plan as job progresses to determine additional practices or training needed

☐	☐
☐	☐
☐	☐

CONTRACTOR FOREMAN/COMPETENT PERSON

- › Immediately able to correct any unsafe practices or conditions
- › Instructions given to all employees so they understand the hazards and procedures
- › Protect leading edges when it is not actively and continuously under construction

☐	☐
☐	☐
☐	☐

INEASIBILITY OF CONVENTIONAL FALL PROTECTION SYSTEM

Check which applies: ☐ Exterior Wall Section ☐ Floor Sheathing & Joint Truss
☐ Roof Trusses/Rafters ☐ Roof Sheathing ☐ Other _____

- › The installation of fall protection systems for a short duration is not feasible because it exposes the installers to the same fall hazard but for a longer period of time
- › The weight of the net could cause the walls to collapse
- › There are no suitable anchorage points
- › Possible trapped and crushed by moving member (truss)
- › Workers cannot face the ladder while working
- › Ladders cannot be adequately protected from movement
- › Workers may experience additional fatigue
- › Recent backfilling cannot support the weight of scaffolds
- › Erecting and dismantling creates a greater hazard

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐



ERECTION OF EXTERIOR WALLS:

- › Controlled Access Zones
- › Leading Edge Work
- › Materials are conveniently staged
- › Cut and prepare materials away from edge
- › Avoid working with your back against any fall hazard
- › Other

YES	NO
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

INSTALLATION OF FLOOR JOISTS & SHEATHING:

- › Controlled Access Zones
- › Leading Edge Work
- › Materials are conveniently staged
- › Set first joist from the ground, ladders or sawhorse scaffolds
- › Secure a deck (a sheet of plywood) to joists or trusses
- › Secure each successive floor joist from this deck
- › Avoid working with your back against any fall hazard
- › Other

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

LOW SLOPE ROOF WORK GENERAL REQUIREMENTS:

- › Controlled Access Zones
- › Warning line system (greater than 50 ft wide)
- › Safety monitoring system
- › Other

☐	☐
☐	☐
☐	☐
☐	☐

INSTALLATION FOR ROOF TRUSS & RAFTER ERECTION:

- › For walls 8 ft or less install trusses using interior scaffolding
- › For walls 8 ft or more work from the top plate
- › Set first 2 trusses from ladders and secure from the top plate
- › After trusses are adequately braced use them for support
- › While on the peaks sit on the "ridge seat" or lean through truss
- › Minimize time spent on the peaks
- › Other

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

INSTALLATION PROCEDURES – ROOF SHEATHING OPERATIONS:

- › Clean shoes/boots of mud and other slip hazards
- › Install bottom row by standing in truss webs
- › Install a slide guard that extends the width of the roof
- › Install additional rows of sheathing from the previous rows
- › Suspend operations in inclement and dangerous weather
- › Other

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

UNSAFE ACTS AND/OR CONDITIONS OBSERVED:

Courage Safety Systems, LLC ("Courage Safety") is not responsible for unsafe conditions and situations not seen during this safety survey. The items listed above represent only what was seen at the time of the visit. Courage Safety is not responsible for any ongoing unsafe condition(s) whether seen or unseen. In addition, Courage Safety does not have the authority or authorization to approve, certify, or warranty any safety equipment or safety device. This agreement also indemnifies Courage Safety of any omission, gross negligence, or willful misconduct related to this report. Under Federal, State and Local Law, it is the responsibility of each Employer on the jobsite to maintain a safe and healthy workplace for their own employees. Courage Safety Systems, LLC has no duty to trade contractor employees on the jobsite.



COMPANY: _____ DIVISION: _____

LOCATION/SITE: _____ DATE: _____

SITE SUPERINTENDENT: _____

name
title
signature

FIRE EXTINGUISHER SAFETY INSPECTION LOG

DATE	EXTINGUISHER TYPE (A, B, C)	LOCATION	DATE LAST TESTED	INITIALS



COMPANY: _____ DIVISION: _____

LOCATION/SITE: _____ DATE: _____

SITE SUPERINTENDENT: _____

name
title
signature

FORKLIFT/CONSTRUCTION VEHICLE PRE-USE INSPECTION CHECKLIST

Forklift Truck/Vehicle Type: _____ Fuel Type: _____

Load Capacity: _____

INSPECTION CHECKLIST	YES	NO
Are hoses flexible and attached?		
Is there adequate fuel?		
Is tire pressure adequate?		
Are the tires in good condition?		
Did you notice any loose parts?		
Is the equipment approved for the atmosphere to be operated in?		
Have you checked the brakes?		
Are back-up alarms operational?		
Are forks positioned correctly?		
Is there adequate ventilation for its use?		
Have SDSs been consulted for load or materials to be transported?		
Have load limits been identified?		
Have clearances been noted?		
Have all gauges and fluid levels been checked?		



COMPANY: _____ DIVISION: _____

LOCATION/SITE: _____ DATE: _____

SITE SUPERINTENDENT: _____

name
title
signature

TYPICAL MINIMAL LOCKOUT OR TAGOUT SYSTEM PROCEDURES

The following simple lockout procedure is provided to assist in developing programs to meet the requirements of this standard. When the energy isolating devices are not lockable, tagout may be used, provided the employer complies with the provisions of the standard, which require additional training and more rigorous periodic inspections. When tagout is used and the energy isolating devices are lockable, the employer must provide full employee protection and additional training and more rigorous periodic inspections are required. For more complex systems, more comprehensive procedures may need to be developed, documented, and utilized.

Lockout Procedure

This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energization or start-up of the machine.

Compliance with this Program

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment, which is locked out to perform servicing, or maintenance shall not attempt to start, energize or use that machine or equipment. Type of compliance enforcement to be taken for violation of the above.

Sequence of Lockout

- (1) Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance. Name(s)/Job Title(s) of affected employees and how to notify.
- (2) The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.
- (3) If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.). Type(s) and location(s) of machine or equipment operating controls.



- (4) Deactivate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s). Type(s) and location(s) of energy isolating devices.
- (5) Lock out the energy isolating device(s) with assigned individual lock(s).
- (6) Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. Type(s) of stored energy – methods to dissipate or restrain.
- (7) Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate.

CAUTION: Return operating control(s) to neutral or “off” position after verifying the isolation of the equipment. Method of verifying the isolation of the equipment.

- (8) The machine or equipment is now locked out.

Restoring Equipment to Service:

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps should be taken.

- (1) Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
- (2) Check the work area to ensure that all employees have been safely positioned or removed from the area.
- (3) Verify that the controls are in neutral.
- (4) Remove the lockout devices and reenergize the machine or equipment.

Note: The removal of some forms of blocking may require reenergization of the machine before safe removal.

- (5) Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.



COMPANY: _____

LOCATION / JOBSITE: _____ DATE: _____

SUPERVISOR: _____
*name title signature***NOTIFICATION OF HAZARDOUS ACT/ CONDITION**TO: _____
*name of contractor or controlling employer*THE COMPANY WANTS TO SPECIFICALLY DRAW YOUR ATTENTION TO THE
FOLLOWING HAZARDOUS ACTS AND/OR CONDITIONS THAT WERE RECENTLY
OBSERVED:

AS THE CONTROLLING EMPLOYER, WHO HAS THE AUTHORITY AND
RESPONSIBILITY FOR ENSURING THAT THIS/THESE HAZARDOUS CONDITIONS
AND/OR ACTS ARE CORRECTED, PLEASE TAKE THE NECESSARY STEPS TO ABATE
THIS SITUATION.

REPLY:

name title signature

ACCIDENT PREVENTION ADVISORY HAZARD COMMUNICATION

COMPANY: _____ DATE: _____

LOCATION/SITE: _____

FROM: _____

Name

Title

Signature

TO: _____

COPY TO: Safety Administrator
 Safety Committee
 Other: _____

The following safety hazard/hazards have been identified. It is most important that all affected employees recognize the nature of the danger and avoid it/them.

Type of hazard: _____

Location of hazard: _____

Severity of hazard: _____

Description of hazard: _____

Corrective action recommended: _____

This space reserved for recipients response:

name

title

signature

date



COMPANY: _____

SAFETY PERFORMANCE REVIEW REWARD & DISCIPLINE PROCEDURE

EMPLOYEE NAME: _____ POSITION: _____

REVIEW PERIOD FROM: _____ TO: _____

YEARS EMPLOYED: _____ # LOST WORK DAYS ACCIDENTS/ILLNESSES: _____

DOES EMPLOYEE WORK/ACT SAFELY?: ☐ YES ☐ NO

DOES EMPLOYEE PARTICIPATE IN COMPANY SAFETY EFFORTS? IF SO, HOW?:

DOES EMPLOYEE QUALIFY FOR SAFETY RECOGNITION AWARD? IF SO, WHY?:

DOES EMPLOYEE NEED TO IMPROVE SAFETY PERFORMANCE? IF SO, HOW?:

SUPERVISOR: _____ TITLE: _____ DATE: _____

signature

PROGRESSIVE SAFETY DISCIPLINE – Check as appropriate:

FIRST SAFETY VIOLATION: Supervisor/Manager will issue a verbal warning and document the terms of the warning and circumstances of the safety violation including date.

SECOND SAFETY VIOLATION: Supervisor/Manager will issue a written warning which will include full circumstances of the safety violation and detailing specific ways this behavior can be prevented from recurring. Employee should sign the warning note acknowledging his/her full understanding and awareness of impending action by management should this happen again.

THIRD SAFETY VIOLATION: Supervisor/Manager will suspend the employee without pay for five days. Termination procedure should also be considered depending on circumstances.

EMPLOYEE: _____ DATE: _____

signature *print name*



Accident/ Injury/ Illness Investigation Report

SECTION 1; STATEMENT OF FACTS:

Name of Injured: _____

Time & Date of Injury/Illness: _____ Direct Employer: _____

Last Day Worked: _____ Date Returned to Work: _____

HR Department Notified? ☐ YES ☐ NO Legal Counsel Notified? ☐ YES ☐ NO

Supervisor Notified? ☐ YES ☐ NO Workers Comp. Insurance Notified? ☐ YES ☐ NO

Serious Injury? ☐ YES ☐ NO If yes, is it serious enough to report to OSHA? ☐ YES ☐ NO
(If in doubt, see OSHA reporting requirements)

Nature and Extent of Injury: _____

Job-Site Location of Accident: _____

Witnesses: _____

Engaged in What Work When Injured: _____

Description of Events Leading up to Accident: _____

Name and Address of Physician and Hospital: _____

Was Safety Equipment Provided by a Direct Employer? ☐ YES ☐ NO ☐ DON'T KNOW

SECTION 2; STATEMENT OF OPINION:

In Your View:

- i. Was this Accident Preventable? ☐ YES ☐ NO ☐ NOT SURE
- ii. Was the Accident an Unsafe **Act** or Unsafe **Condition**? ☐ ACT ☐ CONDITION
- iii. If Unsafe **Act**, describe why you think so: _____
- iv. If Unsafe **Condition**, what needs to be done to prevent another similar event? _____
- v. What actions have been taken to prevent similar accidents? _____

Investigated By: _____ Date: _____



LIGHT DUTY / MODIFIED DUTY WORKSHEET

Company: _____ Division: _____

Name of Employee: _____

Date of Injury/Illness: _____ Nature of Injury/Illness: _____

Last Day Worked: _____ Date Returned to Work: _____

Physical Limitations: ☐ YES ☐ NO If YES, Specify: _____Other Limitations: ☐ YES ☐ NO If YES, Specify: _____Engaged in what work when injured?:

_____Demands of the work assignment?:

_____In employee's opinion, what tasks can now be accomplished safely:

_____Risks of re-injury?:

_____Is employee pleased to be able to come back to work on light duty?: ☐ YES ☐ NOOutcome:

*supervisor's signature*_____
employee's signature

This certificate of record of safety training should be filed in the employee file to document ongoing and active safety training for whatever subjects the training sessions have covered.

Certification Record

To: _____

For: _____

Safety Training

Date of Training: _____

Signature



SECTION 1.2 RESPONSIBILITY AND AUTHORITY

(Insert Company Name)

Employer's First Report of Injury/Illness Form

Name of Injured: _____

Date of Injury/Illness: _____ Time of Accident: _____

Last Day Worked: _____ Date Returned to Work: _____

Workers Comp. Insurance Notified? ☐ YES ☐ NO

Death Resulting? ☐ YES ☐ NO If yes, date of death: _____

Job-Site Location of Accident: _____

Witnesses: _____

Engaged in What Work When Injured: _____

Description of Events Leading up to Accident: _____

Nature and Extent of Injury: _____

Name and Address of Physician and Hospital: _____

Was Safety Equipment Provided? ☐ YES ☐ NO Was It Used? ☐ YES ☐ NO

Could the Accident have been Prevented? ☐ YES ☐ NO

If yes, describe how the accident could have been prevented: _____

Reporting Employee's Name: _____

Supervisor's Name

Supervisor's Signature

Date of Report



SAFETY SUGGESTION FORM

NAME: _____
(optional)

LOCATION: _____
(optional)

SUGGESTION:

Signature (optional)

Date

SUPERVISOR'S COMMENTS:

SAFETY COMMITTEE REVIEW:





Safety Certification Record

To: _____

Company: _____

**One Year without Lost-Time
Injury/Accident**

Anniversary Date: __/__/__ _____



Signature



COURAGE SAFETY SYSTEMS ACCIDENT INVESTIGATION - DOCUMENT REQUEST SHEET

GENERAL CONTRACTOR: _____ ID# _____

DATE: _____ GC CONTACT: _____ SUB CONTACT: _____

INJURED WORKER: _____ EMPLOYER: _____

RECEIVED BY: _____

*name**signature**date*

**IT HAS BEEN DETERMINED THAT COPIES OF THE FOLLOWING DOCUMENTS ARE
REQUIRED FOR REVIEW. PLEASE PROVIDE COPIES OF THE FOLLOWING DOCUMENTS.
IF THE REQUESTED INFORMATION IS NOT PROVIDED IT MAY BE INTERPRETED BY
OSHA AS AN ADMISSION THAT THE DOCUMENTS DO NOT EXIST.**

Requested Document	Date Range	Trade Contractor	Received: YES/NO	Date Received
1. Inspection Sheets				
2. Training Records				
3. Reward and Discipline Procedures				
4. Accident Investigation Report				
5. Extent of Injuries				
6. Personal Protective Equipment Issued				
7.				
8.				
9.				
10.				

Comments: _____

Follow-Up Activity: _____



TRADE CONTRACTOR SAFETY PROGRAM COMPLIANCE DECLARATIONS

Construction Site: _____ Date: _____

Trade: _____

Company: _____ Phone #: _____

Address: _____

Safety Administrator/Consultant: _____

I/we the undersigned trade contractor understanding our controlling employer responsibility and authority for the safety of our employees on the jobsite declare our compliance with all OSHA rules and regulations, specifically for the key components here under.

- | | |
|---|---|
| <ul style="list-style-type: none"> • Written Workplace Safety Program
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Regular Periodic Safety Inspections
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Safety Training Programs
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Tailgate Talks Conducted Every 10 Days
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • SDS's
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Codes of Safe Practices
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Drug & Alcohol Policy
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Rewards & Discipline System
Date Initiated: _____ | Yes ☐ No ☐ |
| <ul style="list-style-type: none"> • Heat Illness Prevention
Date Initiated: _____ | Yes ☐ No ☐ |

Signature

Name (printed)

Title



Confined Space Evaluation Worksheet

Location: _____ **Inventory ID:** _____

Description of Space: _____

1. Defining Questions - Confined Space (Provide details for any "YES" response.)

Yes **No**

- ☐ ☐ *Is large enough and so configured that an employee can bodily enter and perform assigned work*

Details:

- ☐ ☐ *Has limited or restricted means for entry or exit*

Details:

- ☐ ☐ *Is not designed for continuous employee occupancy*

Details:

If **ALL** of the above are "YES," this is a Confined Space. Go to Section 2. If **ANY** of the above is "NO" then this is not a Confined Space. Go to Section 3.

2. Defining Characteristics - Permit-required Confined Space (Complete this section **ONLY** if all of the above are "YES." Provide details for any "YES" response.)

Yes **No**

- ☐ ☐ *Contains or has a potential to contain a hazardous atmosphere*

Details:

- ☐ ☐ *Contains a material that has the potential for engulfing an entrant*

Details:

- ☐ ☐ *Has an internal configuration that could trap or asphyxiate by converging walls or downward slope tapering to a small cross-section*

Details:

- ☐ ☐ *Contains any other recognized serious safety and health hazard*

Details:

If **ALL** of the above are "NO" then this is a Non-permit Confined Space. If **ANY** of the above is "YES" then this is a Permit-required Confined Space. Go to Section 3.

3. Conclusion: This space is

- ☐ NOT a Confined Space.
- ☐ Non-permit Confined Space.
- ☐ Permit-required Confined Space with defining characteristics listed above.

Evaluated by: _____ **Date:** _____

Print and sign name

- ☐ *Safe Work Procedure required for entry into this space.*

Details:



CONFINED SPACE PERMIT AUTHORIZATION

1. AUTHORIZATION

- a. AUTHORIZED CONTRACTOR: _____
- b. AUTHORIZED OBSERVER NAME: _____
- c. AUTHORIZED OBSERVER SIGNATURE: _____

2. NAMES OF PERMITTED EMPLOYEES

a.	b.
c.	d.
e.	f.
g.	h.
i.	j.

3. ACCESS METHODS:

4. HAZARD ASSESSMENT

ERGONOMIC: ACCESS OR OCCUPANCY CONSTRAINTS	ATMOSPHERIC: OXYGEN DEFICIENCY
ATMOSPHERIC: COMBUSTION OR ENGULFMENT	ATMOSPHERIC: TOXIC GASES OR VAPORS

5. TESTING EQUIPMENT (IF ATMOSPHERIC HAZARD)

DEVICE MAKE/MODEL:
DEVICE MAKE/MODEL:
DEVICE MAKE/MODEL:

6. ATMOSPHERE MONITORING AND MANAGEMENT

TEMPERATURE	OXYGEN	GASES	VAPORS

7. PERSONAL PROTECTIVE EQUIPMENT PROVIDED

HARD HATS	MONITORING DEVICES	RESPIRATORY PROTECTION
SAFETY GOGGLES/GLASSES	TYPE:	TYPE:
HEARING PROTECTION	+	+

8. PERMIT AUTHORIZATION:

AUTHORIZED OBSERVER: _____

signature

GENERAL CONTRACTOR: _____

signature

EMERGENCY MEDICAL RESPONDER: _____

signature

RESPONDER ACKNOWLEDGEMENT OF PERMIT: _____

signature



SILICA EXPOSURE CONTROL PLAN

Date Plan Established and Implemented: _____

1. Tasks that may involve exposure to Silica Dust include, but are not limited to:

- | | | |
|--|---|---|
| ☐ Sandblasting | ☐ Abrasive Drilling | ☐ Surface Grinding |
| ☐ Concrete Mixing | ☐ Rock/Stone Cutting | ☐ Blasting |
| ☐ Mortar Mixing | ☐ Masonry Cutting | ☐ Earth Moving |
| ☐ Sawing | ☐ Sweeping | ☐ Chipping/Jackhammering |
| ☐ Tuck Pointing | ☐ Demolition | ☐ Other: |
| ☐ Walk-Behind Saw | ☐ Tunneling | |

2. Describe all engineering controls, work practices, and respiratory protection that will be used to limit employee exposure to Silica Dust for each task (refer to Table 1). If the task is not defined inside of Table 1, a risk assessment of the task and activity must be carried out. Contact your local safety professional for tasks that may involve an exposure to Silica Dust outside of Table 1.

3. Describe cleaning and housekeeping measures that will be used to limit employee exposure to Silica Dust. Include requirements for respirator use. Dry sweeping, dry brushing, and use of compressed air are not allowed (unless compressed air is part of a ventilation system that captures dust).

- ☐ Wet sweeping will be used
- ☐ Hepa-Filter vacuum system will be used
- ☐ Sweeping compound will be used to limit exposure of airborne crystalline silica dust

4. Describe procedures to restrict employee access.

- ☐ Post signs at entrances:
**DANGER – RESPIRABLE CRYSTALLINE SILICA. MAY CAUSE CANCER.
 CAUSES DAMAGE TO LUNGS. WEAR RESPIRATORY PROTECTION IN THIS
 AREA. AUTHORIZED PERSONNEL ONLY.**
- ☐ Erect barricading to restrict access
- ☐ Brief/Tell employees on site when scheduling high-exposure tasks and intention for mitigating exposure to respirable crystalline silica.

5. Person responsible for implementing this plan (name and phone number):

Name

Phone Number



SILICA EXPOSURE CONTROL PLAN

Create a specific plan to control dust at: <https://plan.silica-safe.org/>

Step 1. Will you generate dust containing silica on the job?

The materials listed below contain silica. Select all of the materials you plan to use. As you select a material a list of dust generating tasks will appear. Please select the task(s) that you will perform with the material.

- | | |
|---|--|
| ☐ Asphalt | ☐ Refractory Mortar/Castables |
| ☐ Brick | ☐ Refractory Units |
| ☐ Cement | ☐ Rock |
| ☐ Concrete | ☐ Roof Tile (concrete) |
| ☐ Concrete Block | ☐ Sand |
| ☐ Drywall | ☐ Soil (fill dirt, top soil, soil w/ fly ash added) |
| ☐ Fiber Cement products | ☐ Stone (including: granite, limestone, quartzite, sandstone, shale, slate, cultured, etc.) |
| ☐ Grout | ☐ Stucco EIFS |
| ☐ Gunite/Shotcrete | ☐ Terrazzo |
| ☐ Mortar | ☐ Tile (clay and ceramic) |
| ☐ Paints containing silica | ☐ Material Other |
| ☐ Plaster | |

If you will not be using one of the materials listed above or another silica-containing material,

You Don't Need a Silica Control Plan.

If you are not sure if a material contains silica, there are several ways you can find out... [learn more.](#)

CLEAR THE PLAN

How does the Create-A-Plan tool work?
(<http://www.silica-safe.com/www.silica-safe.org/plan/overview>)

CONTINUE





Websites: www.CourageSafety.com www.CourageSafetyTraining.com www.TailgateTalks.com
Email: Courage@Earthlink.net Phone: (800) 673-7569 & (949) 498-2688 Fax: (949) 498-1908

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Client understands and agrees that pursuant to the delivery of this safety manual, Courage has agreed to provide safety consulting services to Client to help Client comply with its safety requirements as required by OSHA. Client further understands and agrees that Courage is not an insurer of the safety or safety practices of Client, its employees, and invitees, nor the insurer of the safety or safety practices of Client's subcontractors and their employees, or any other person who may from time-to-time visit the project. As such, Client agrees to defend, save, indemnify and hold harmless Courage against any and all loss, liability, expense, claims, judgment, or demands, including demands arising from injuries to or death of persons, including, but not limited to, Client's employees and/or any of Client's subcontractor's employees, or any other loss, damage or expense, arising directly or indirectly out of or from any injuries or death, including those due to the active or passive negligence of Courage save and except liability, claims, judgments or demands arising through the sole "active" negligence or sole willful misconduct of Courage, and Client will make good to and reimburse Courage for any expenditures, including attorney's fees, which Courage may incur by reason of such matters, and if requested by Courage in any such actions or proceedings at the sole cost and expense of Client.

