



IMS BELTON

Industrial Maintenance &
Services of Belton, Inc.
864-338-7020

SAFETY HANDBOOK

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1.1 GUIDING PRINCIPLES

INDUSTRIAL MAINTENANCE & SERVICES

will protect the health and safety of all persons affected by our business activities, and protects the environment in all our operations. Health, safety and environmental excellence are a primary management objective and the responsibility of every employee. The company is dedicated to continuous efforts to make its operations compatible with protecting people, property and the environment. To ensure this commitment, the Company will strive to:

- 1.1.1 Identify and eliminate any unsafe conditions and/or equipment through proper engineering controls.
- 1.1.2 Identify and eliminate any unsafe work practices and/or procedures by its employees
- 1.1.3 Provide necessary personal protective equipment that is required by the Company.
- 1.1.4 Comply with all Local, State, and Federal Safety and Health Programs.

Kevin T. Craft
President / General Manager



EMERGENCY CONTACTS

Company Contact	
Phone Number	
Client Contact	
Phone Number	
Safety Contact	
Phone Number	

Injury Reporting Protocol

1. Serious or life threatening injury:

Call _____

2. For injuries that require medical attention:

Call _____

3. For injuries requiring minor first aid:

Call _____

COMMITMENT TO OUR SAFETY MANAGEMENT SYSTEM

Values & Beliefs:

We believe a standard Safety Management System enables our company to drive consistent success with safety performance. A uniform approach instills discipline into our processes and it institutionalizes our high expectations for safety results.

Vision:

Our vision is to create and deliver a Safety Management System that is recognized as an industry benchmark and acknowledged as a fundamental driver in our safety results mentality.



Mission:

Our mission is to execute uniform SAFE HABITS that create a SAFE CULTURE flexible to client and regional requirements.

Principles of Excellence:

We will use the Safety Management System as a baseline for success. We will adjust our system as required to meet the needs of clients and protect the quality of life of workers on our jobs. We will operate according the following principles.

- We will visibly demonstrate commitment to safety through our actions.
- We will engage and involve workers in the safety process.
- We will preplan safety into every job and task.

- We will analyze equipment and work practices to drive safety improvement.
- We will equip workers to perform safely through training and development.
- We will establish a safety communication strategy that keeps workers informed.
- We will establish prevention and controls to keep workers safe.



SAFETY CODE OF PRACTICE

The following Safety Code of Practice has been established by IMS BELTON and is to be adhered to by all personnel as a condition of continued employment on this project.

Questions concerning this code may be referred to the IMS BELTON safety manager.

1. All personnel shall comply fully with the project safety manual and with all requirements and regulations of the applicable regulatory agencies.
2. All personnel performing services on the project will be required to complete an orientation and indoctrination session.
3. All personnel must wear an approved non-conductive hard hat, proper eye protection with side shields, sturdy leather steel-toed footwear and other safety equipment in the construction areas. Safety equipment for employee's use will be provide by the employing contractor.
4. Misuse or willful destruction of any Owner or contractor-furnished property including, but not limited to, identification badges, hard

hats, safety equipment or clothing or tools is grounds for termination and removal from the property.

5. All injuries, no matter how slight, must be reported immediately to your supervisor and to contractor's supervision.
6. All property damage, no matter how slight must be reported
7. Work areas must be kept clean and orderly at all times. Use trash containers for all waste materials. Housekeeping is to be done daily or more often as required.
8. Nails or other sharp objects left protruding from concrete or lumber will either be pulled or will be bent over to remove the hazard of accidental puncture wound.
9. Willful and/or repeated violation of safety rules or safe work practices will not be tolerated.
10. At times, certain areas within the project maybe posted as "off limits" or "restricted access" areas. All employees shall honor these notices for their own protection; for example, Radiology, High Voltage, Safety Hazard, Security Need.



11. Leather steel-toed safety shoes meeting appropriate OSHA standard will be worn in all areas of the job outside of the offices. Shirts with a minimum 4-inch sleeve shall be worn, except that long sleeves may be required in specified areas. Full-length trousers are required.
12. Any medication taken regularly must be reported to contractor's supervision.
13. Smoking, if allowed, will be in designated areas only.
14. All forms of gambling are prohibited.
15. Cameras are prohibited without the expressed written consent of IMS BELTON.
16. Any person under the influence of or in the possession of any alcohol or illegal drug will not be permitted to enter the project or loiter on property.
17. Firearms, alcoholic beverages, illegal drugs, or explosive will not be permitted on the site.
18. Open flame/burning requires a permit.
19. Employees will enter and leave the job site through the appropriate designated gate.
20. Anyone reporting to work intoxicated or

apparently under the influence of intoxicants or drugs will not be permitted on the job site. Any person using intoxicants or illegal drugs on the project is subject to immediate and permanent removal from the project.

21. All extension ladders will be non-conductive and shall be secured, tied off, and extended 3 feet above landing area. Stepladders shall only be used in the fully opened position and secured if necessary.
22. All welding lead, air hoses, paint spray hoses, extension cords, etc. are to be kept off walk areas and will be installed overhead a minimum of 7 feet or along handrails. They must be bridged where equipment will pass over.
23. When personnel are involved in connecting or disconnecting structural steel at elevated locations, they must wear a full body harness with lanyard and must tie off while bolting up.
24. Any welding will be done under hard hat welding hoods.
25. Containers used for bolts or other material shall be secured against accidental



displacement when working in elevated locations.

26. All employees working off floats, boatswain's chairs, and swinging scaffolds shall wear harnesses attached to individual lifelines.
27. Employees are not allowed to walk steel unprotected. Where feasible, static lines are to be run. A safety harness is to be worn with lanyard attached to a static line.
28. No cable will be used for mid line or top line without a turnbuckle installed for continued adjustment. Cable line may not have more than 3 inches of deflection.
29. Ropes and/or cables shall not be used for guardrails, except 1/2 inch wire rope or equivalent is acceptable on a structure periphery and as a temporary solution.
30. All planking used overhead shall be wired off and secured.
31. All oxygen and acetylene bottles shall be kept capped except when gauges are in use and secured in an upright position. Oxygen and acetylene shall be stored separately

- by at least 20 feet or separated by a 5-foot high 30-minute fire-resistant plate.
32. Tag lines are to be used on all material and equipment raised overhead.
 33. All material and equipment being moved with rubber-tied cranes shall be secured back to the crane.
 34. All air hoses are to be safety wired at connectors, or whip checks will be used.
 35. Skips (man baskets) shall not be used unless no other safety means of access is available.
 36. Weekly contractor tool-box safety meetings will be held so that safety-related questions may be asked, suggestions made, and problems relating to safety and work may be discussed.
 37. Start up and maintenance of heating equipment, etc., shall be done by authorized personnel. Unauthorized fires will not be permitted. Open fires for heating or cooking are not allowed.
 38. Gasoline, diesel fuel, kerosene and flammable solvents such as naphtha, xylene,



or acetone shall be handled in approved safety cans and properly identified as to contents that shall not be used for other purposes.

39. All valves and switches permanently installed on the project shall be operated only under direct supervision of authorized personnel.
40. Fire protection equipment and material shall be used only for fire extinguishing or fire prevention.
41. Stretchers shall remain in location assigned until changed by authorized personnel or required for emergency use.
42. Fighting, "horseplay, or engaging in practical jokes is prohibited.
43. Firearms will not be permitted on the property.
44. Permits will be required for hot work, open flame/burning, confined space, line breaks, trenching etc. Safeguards listed on the permits must be followed.
45. Spills must be properly resolved with notification of proper authorities as required.

SUPERVISOR'S RESPONSIBILITIES

As a supervisor you are required to:

- ✓ Possess a comprehensive knowledge of incident prevention processes and project SAFETY requirements.
- ✓ Accept responsibility for the implementation of incident prevention processes and safe work practices at the project/site.
- ✓ Explain applicable rules, requirements, and procedures to employees under your direct supervision and ensure each employee understands the rules, requirements, and procedures.
- ✓ Consistently enforce SAFETY rules, requirements, and procedures.
- ✓ Maintain a zero tolerance for unsafe acts.
- ✓ Supervise the instruction and training of new employees.
- ✓ Monitor employees' performance to ensure the use of safe work practices.



- ✓ Be responsible for the use, and maintain personal protective devices, equipment, and safeguards.
- ✓ Notify direct supervisors and/or the SAFETY Representative concerning work areas where unique SAFETY hazards exist and/or special assistance is required.
- ✓ Perform routine and organized SAFETY inspections in your work areas.
- ✓ Attend and participate in supervisor SAFETY meetings.
- ✓ Conduct “toolbox” incident prevention meetings for employees under your supervision as required by project procedures.
- ✓ Immediately report all incidents that have, or could have, resulted in personal injury or property damage.
- ✓ Accompany ill/injured workers to treatment facilities, and assist in case management

- ✓ Assist in incident investigations and submit a report promptly on required forms.
- ✓ Analyze work in detail for the purpose of issuing pre-job briefs and for the establishment of safe work practices.
- ✓ Participate in the preparation of departmental or project SAFETY rules.
- ✓ Correct SAFETY hazards on the spot.
- ✓ Maintain a consistent use of the pre-job brief process.



EMPLOYEE SAFETY RESPONSIBILITIES

You have a responsibility to:

- ✓ Work safely to the best of your knowledge.
- ✓ Immediately correct or report unsafe conditions to your supervisor and/or SAFETY Representative.
- ✓ Provide information to supervision for improving project/site SAFETY conditions.
- ✓ Obey the rules, requirements, and SAFETY instructions given to you on this project/site.
- ✓ Understand project/site SAFETY goals and objectives.
- ✓ Wear safety equipment properly.
- ✓ Report injuries immediately to your supervisor; if after hours, make positive contact by phone
- ✓ Attend scheduled SAFETY training sessions.

- ✓ Take an interest in the safety of crewmembers – especially helpers. Your guidance and the benefit of your experience will be appreciated.
- ✓ Take an interest in protecting the environment that could be impacted by the project/site's activities.
- ✓ Have a working knowledge of tools and equipment before operating them.
- ✓ Pay special attention to new employees; they may not know all the rules and may need your help to work on this project/site in a safe manner.
- ✓ Report unsafe acts and conditions to your supervisor.
- ✓ Discuss any assignment that you feel is unsafe with your foreman or supervisor. If you are still not convinced that you have been requested to perform a task in a safe manner, then use the open-door policy. Discuss the issue with the next supervisor up the chain of command (all the way to the Project/Site Manager or



the SAFETY Representative) until you are satisfied that the assignment or work procedure is safe.

- ✓ You will be subject to disciplinary action by your supervisor for committing an unsafe act, which may include termination of employment. Taking chances or risks concerning safety will not be tolerated!

UNSAFE ACTS ARE PROHIBITED!

IMS BELTON HAS THE REPUTATION FOR BEING THE SAFEST COMPANY IN THE INDUSTRY. THIS IS BECAUSE EVERYONE WORKING ON OUR PROJECTS/SITES IS SAFETY-CONSCIOUS. DON'T FORGET THAT YOU ARE THE SAFETY PROGRAM AND THE SAFETY PROGRAM IS FOR YOU!

DISCIPLINARY ACTION

1.0. Safety Department's Role

Safety Representatives coordinate accident prevention as it applies to all areas of the safety and health program. The company Safety Representative should report directly to the company project manager. The safety department does not exercise direct operational control of any project work.

Safety department personnel have the authority to correct and instruct employees concerning safety violations. They can stop work in situations of imminent danger. If the safety representative witnesses an unsafe work behavior or condition that requires the application of disciplinary program, they will notify the appropriate supervisor. It is the supervisor's responsibility to carry out the necessary disciplinary action. If the supervisor fails to follow through with the appropriate disciplinary action, the Safety Representative will elevate the case through the chain of command.



The Safety Representative may provide advice on the appropriate level of disciplinary action but they will not administer the discipline. That is the supervisor's responsibility.

It is important to note that it is the responsibility of all managers and supervisors employed by **IMS BELTON** or any contractor to hold workers accountable for safety with disciplinary action. It is not the Safety Departments responsibility to drive the process.

2.0 Manager and Supervisor Role

All on-site managers and supervisors shall:

- ✓ Know and support established rules and procedures.
- ✓ Abide by rules and procedures.
- ✓ Ensure that all subordinates are made aware of these rules and procedures.
- ✓ Document all training that employees receive concerning rules and procedures, i.e., toolbox meetings, special task training, etc.

- ✓ Enforce safety rules and procedures consistently and predictably.

3.0 Level One Serious Safety Violation

A Serious Safety Violation is a violation with a substantial probability that death, serious physical harm, major equipment damage, or work stoppage could result.

Employees who commit serious safety violations will be subject to a written reprimand or immediate termination. A documented oral reprimand cannot be issued in this case. The second violation categorized as serious will result in an automatic termination, provided the second violation occurs within one year of the first.

See Classification Table

4.0 Level Two Safety Violation

A Safety Violation has a direct relationship to work place safety and health where the exposure is not likely to cause death, serious physical harm, or major equipment damage.

Safety violations call for a written reprimand for the first violation noted. Termination



may occur for the second violation noted, provided the violation occurred within one year of the first. It is not necessary for the safety violation to be identical for the progressive steps of discipline to apply. In the case of willful or especially serious violations of safety rules, IMS BELTON and/or Owner will have the right to exclude any person from the site.

See Classification Table

5.0 Other Discipline Reasons

From time to time reasons other than safety might exist for disciplinary action. Such reasons might include fighting, disobedience of instruction or serious misconduct. In such cases the same procedures outlined above are to be followed as necessary.

Classification of Safety Violations

SERIOUS SAFETY VIOLATIONS

Level 1 Serious -- Immediate Danger to Life and Health (IDLH)

- Failing to post warning signs and barricades under areas where debris is being dropped through holes in a structure without using chutes.
- Working in an elevated position without the use and proper securing of a safety harness, when such is required.
- Breaking chemical and pressurized lines and failing to wear proper chemical suit and face shield or goggles.
- Conscious disregard of a “DO NOT OPERATE” “DANGER,” “WARNING,” or “CAUTION” sign when conditions or activities endanger your life or the lives of others.
- Removing another worker’s lockout sign or tag without authorization.



- Using rigging equipment in excess of its recommended safe workload.
- Intentionally altering a hand or power tool by removing its guard or safety mechanism.
- Welding or cutting in confined spaces without sufficient ventilation or while not utilizing the appropriate respiratory protection equipment.
- Welding or cutting in areas or on objects where the potential for fire or explosion is great (such as volatile material storage areas, unclear lines, or vessels containing combustible materials).
- Performing work on energized circuits without obtaining proper approval or protective equipment.
- Working on equipment or circuits that could be accidentally or unknowingly energized at the control or disconnect point without the control locked out and tagged.
- Working around an unguarded floor or wall opening without using a proper means of fall protection.

- Operating a crane (lifting, swinging, or loading) adjacent to an energized power line with less than 10 feet (3.1 meters) between power line and any part of crane.
- Using an aerial lift, standing on the mid-rail of the basket with or without utilizing some means of fall protection.
- Operating equipment in a manner that endangers the employee or others.
- Working in a trench or excavation more than 5 feet (1.5 meters) in depth that has not been shored, sloped, benched, or otherwise protected from cave-in.
- Walking on steel beams without using some means of fall protection when 6 feet (1.8 meters) or more above lower levels.
- Gathering or stacking temporary or permanent floor planks or decking sheets (elevated access) without a means of arresting falls.
- Entering a tunnel, manhole, excavation, chase, or shaft that has been classified as a confined space without testing the



atmosphere or obtaining a confined space entry permit.

- Working on power lines without first verifying the lines are deenergized.

Level 2 Serious -- No Immediate Danger to Life and Health (not IDLH)

- Knowingly operating equipment with faulty or defective safety devices.
- Failing to use an excavation permit.
- Failing to provide ladders in excavations.
- Failing to maintain spoil dirt 2 feet (0.6 meters) or greater from the edge of an excavation.
- Working above vertically protruding reinforcing steel that is unprotected.
- Using wall forms or stringers as a means of access to elevated positions.
- Damaging, disabling, or tampering with a ventilation system.
- Disabling a fire protection system without being authorized.

- Allowing unauthorized people to handle and use explosives.
- Intentional sabotage or unnecessary discharge of a fire extinguisher or fire fighting equipment, rendering it useless or disabled.
- Using defective rigging equipment.
- Failing to use a tag line to control suspended loads.
- Using an electrical tool in wet conditions without taking the proper precautions to prevent electrical shock (ground fault circuit interrupters).
- Using a powder-actuated tool without being properly trained or licensed.
- Unauthorized removal of scaffold bracing and/or supports while scaffold is being used.
- Working off of an incomplete scaffold without being tied-off.
- Failing to properly secure a ladder.



- Using an unfinished stairway (missing handrails) for access to elevations above 6 feet (1.8 meters).
- Piling or stacking materials closer than 6 feet (1.8 meters) to an unprotected floor/wall opening or roof edge.
- Failing to barricade the swing radius of a crane.

BENEFIT OF A SAFE CULTURE

- ✓ Strong safety cultures show workers you care.
- ✓ Workers get hurt less in a strong safety culture.
- ✓ Strong safety cultures usually have lower turnover.
- ✓ Strong safety cultures have a positive impact on productivity.
- ✓ Strong safety cultures are more likely to have good morale.
- ✓ Strong safety cultures have visible management commitment.
- ✓ Strong safety cultures are committed to safety training.



PERSONAL RESPONSIBILITY

- ✓ IMS BELTON is obligated to provide a safe workplace.
- ✓ You have an obligation to your employer, co-workers, FAMILY, and yourself to work safely.
- ✓ The ultimate responsibility for safety rests with you.
- ✓ Safety is a learned behavior, mentality, & attitude.
- ✓ It is your responsibility to learn all you can about safety and develop an attitude that will keep you safe.
- ✓ Embrace safety as a core value.
- ✓ Inspect equipment before use.
- ✓ Use safety equipment properly.
- ✓ Approach others when you see something unsafe.
- ✓ Plan safety into your work.
- ✓ Don't take shortcuts.

- ✓ Have a questioning attitude.
- ✓ Correct or report unsafe conditions to your supervisor.
- ✓ Make suggestions to improve safety.
- ✓ Obey the rules, requirements, and safety instructions.
- ✓ Wear safety equipment properly.
- ✓ Report injuries immediately.
- ✓ Attend scheduled training sessions.
- ✓ Take an interest in other's safety.
- ✓ Have a working knowledge of tools and equipment.
- ✓ Mentor new employees.
- ✓ Discuss any assignment that you feel is unsafe with your supervisor.
- ✓ Understand the disciplinary policy.

Help us build a strong safety culture!



SAFE STEPS

1 – PREPLAN YOUR WORK

<p>P Plan Critical Steps</p>	<p>“What do you have to do today?” “Do you have the right tools/equipment?”</p>
<p>E Evaluate the Risks</p>	<p>“What is the worst that could happen?” “Do you understand the task & risk?”</p>
<p>A Anticipate Mistakes</p>	<p>“Where could you make a mistake?” “Are you physically & mentally ready?”</p>
<p>K Know Your Controls</p>	<p>“How will you prevent an event?” “Do you understand the requirements?”</p>

SAFE STEPS 2 – IDENTIFY HAZARDS

Check the box that may apply to the work you are performing. Use the Orientation Book as a reference to see what is required for the category that you check.

√	Potential Category	√	Potential Category
	Aerial Lifts		Material Storage
	Bloodborne		Mobile Equipment
	Concrete		Power Tools
	Confined Space		PPE
	Cranes/Hoist		Respirators
	Electrical		Rigging
	Fall Protection		Scaffolding
	Fire Prevention		Shop Equipment
	Flying Objects		Signs & Barricades
	Hand Tools		Steel Erection
	Haz Com		Suspended Platforms
	Hearing Protection		Traffic Control
	High Pressure		Trenching
	Housekeeping		Vehicles
	Ladders		Walking Surfaces
	Lead		Welding
	Lockout		Slips Trips
	Machine Guarding		Hand Safety



SAFE STEPS

3 – COMMUNICATE HAZARDS & CONTROLS

You have identified potential hazards & controls. The next step is to communicate the safe way to do the job.

√	Communication Method
	Training – Provide required training on the hazards that you have identified.
	Safety Tool Box Talk – Conduct a safety topic based on the hazards you identify.
	JSA – Talk about the hazards & controls listed in your Job Safety Analysis.
	TSA – Talk about the hazards & controls in your daily task safety assessment – FOCUS on the task!
	Approach Others – If you see someone at risk, approach them and tell them about the hazard.
	Mentor – Coach and mentor new employees on the hazards & controls that you identified.
	Signage & Barricades – Post the proper warnings and tell people what they mean.
	Ask Questions – One of the best forms of communication is to ask questions!
	Informal – Make the topics a part of informal discussions about safety. Remind people!

SAFE STEPS 4 – AUDIT & INSPECT

You work in a dynamic environment. Things change quickly and it is critical that you audit & inspect your area and work. If you see something, CORRECT IT!

√	SAMPLE Focused Audits & Inspections
	Inspect fall protection harnesses.
	Inspect mobile equipment.
	Inspect your PPE.
	Inspect your electrical equipment.
	Verify compliance with all Orientation Topics.
	Inspect housekeeping.
	Inspect your tools.
	Inspect your ladders.
	Inspect rigging equipment.



SAFE STEPS

5 – REVIEW LESSONS LEARNED

In step 5, review what you have learned. You can improve safety every day you come to work if you learn from what you experienced the day before. How would you rate your personal performance in these 4 areas?

√	Scale of 1 to 5
	Pre-Planning – How well did you plan, anticipate, and control the risk?
	Hazard Identification – Did you identify all of the hazards and controls?
	Communication – Did you communicate the hazards and controls to everyone?
	Audits & Inspections – Did you inspect and audit your area? Did you correct it?
What did you learn? Were there any surprises? Comments:	

HAZARD IDENTIFICATION



ABRASIVE BLASTING PPE

- ✓ Wear adequate hearing protection devices.
- ✓ Wear hard leather work shoes.
- ✓ Wear clothing made of strong-fibered material, impervious to flying debris.
- ✓ Wear gauntlet-type leather gloves.
- ✓ Workers need medical clearance to wear a respirator.
- ✓ Wear an airline respirator with continuous flow in a protective hood to cover the head, neck, shoulders, and chest.

ABRASIVE BLASTING RESPIRATORS

- ✓ Each hood needs to be equipped with view ports made of impact-resistant safety glass or plastic covered by a metal screen.
- ✓ Equipped with an air purifier and filter for removal of oil, water, and any other organic matter contaminant that might be discharged from the compressor.
- ✓ Each abrasive blasting worker is provided with an airline hose of not more than 300 feet.
- ✓ Equipment has a pressure relief valve attached in case of regulator failure.



ABRASIVE BLASTING EQUIPMENT

- ✓ Equipment has a pressure regulator with an attached gauge provided if the compressor exceeds 25 psi or equivalent.
- ✓ Equipment has an automatic alarm system that will automatically signal both audio and visual alarms if the carbon monoxide (CO) level reaches 10 ppm.
- ✓ Airline hoses are made of a nonelectrical conductor material and hose lengths are joined by couplings secured to the outside of the hose.
- ✓ Cable at least 1/4 in. (0.5cm) in diameter or safety chains are used at each hose connection.

ABRASIVE BLASTING EQUIPMENT

- ✓ Nozzles are attached to the hose by fittings that prevent the nozzle from becoming disengaged.
- ✓ Dead-man controls are provided for the nozzle and hose.
- ✓ Hoses should be compatible with other air hoses and are capped or otherwise protected.
- ✓ Compressors have a receiver with a 30-minute air supply.
- ✓ Collect air samples.
- ✓ Barricaded abrasive blasting areas and posted “KEEP OUT.”



AERIAL LIFTS/ELEVATED WORK PLATFORMS

- ✓ Workers who operate aerial lifts are properly trained in the safe use of this equipment.
- ✓ Maintain and operate elevating work platforms according to the manufacturer's instructions.
- ✓ Never override hydraulic, mechanical, or electrical safety devices.
- ✓ Never move the equipment with workers in an elevated platform unless this is permitted by the manufacturer.

AERIAL LIFTS/ELEVATED WORK PLATFORMS

- ✓ Do not position yourself between overhead hazards, such as joists and beams, and the rails of the basket.
- ✓ Know that movement of the lift could crush the worker(s).
- ✓ Maintain a minimum clearance of at least 20 feet away from the nearest energized overhead lines, **UNLESS** a permit has been developed & issued.
- ✓ Treat power lines, wires and other conductors as energized, even if they are down or appear to be insulated.



AERIAL LIFTS/ELEVATED WORK PLATFORMS

- ✓ Use a body harness and fall restraint to prevent being ejected or pulled from the basket.
- ✓ Set the brakes and use wheel chocks when on an incline.
- ✓ Use outriggers if provided on the lifts.
- ✓ Do not exceed the load limits of the equipment.
- ✓ Allow for the combined weight of the worker and tools.
- ✓ Perform a documented preshift inspection before using a lift or mobile equipment.

BLOODBORNE PATHOGENS

- ✓ Company has a written exposure control plan.
- ✓ Use universal precautions when there is contact with blood of other potentially infectious materials.
- ✓ Feasible engineering and work practice controls have been established to minimize employee exposure.
- ✓ Workers with potential to contact an infectious disease have been identified and trained.
- ✓ Training is provided at the time of initial assignment and at least annually thereafter.



BLOODBORNE PATHOGENS

- ✓ The training program covers the required topics identified in the applicable regulation.
- ✓ Hepatitis B vaccination have been offered to those workers having potential exposure.
- ✓ The medical treatment facility is in a clean and sanitary condition.
- ✓ Hand-washing facilities and procedures are used.
- ✓ Bag valve masks/mouth-to-mouth barriers are readily available.
- ✓ Sharps or syringes are placed in a labeled puncture-resistant, leak-proof container.

BLOODBORNE PATHOGENS

- ✓ Equipment & instruments are immediately disinfected after each use.
- ✓ Contaminated disposables are placed in a leak-proof, puncture-resistant, red biohazard container.
- ✓ Workers exposed to blood or other bodily fluids use the required PPE.
- ✓ Post-exposure follow-up is made available to workers who have had an exposure incident.
- ✓ Medical and training records are kept for the duration of employment plus 30 years - records are kept confidential.



CONCRETE, CONCRETE FORMS, SHORING, MASONRY

- ✓ Appropriate access and egress is provided as required.
- ✓ Exposed rebar ends are protected from exposure, both vertical and horizontal.
- ✓ Masonry saws are guarded with a semicircular enclosure cover.
- ✓ The required type of shoring is erected to contain and/or support concrete, masonry, etc.
- ✓ Precast and lift slab operations are performed in accordance with applicable standards.

CONCRETE, CONCRETE FORMS, SHORING, MASONRY

- ✓ Connections on air hoses and pipes are secured to prevent displacement.
- ✓ Risk assessment on dust hazards is performed and recommendations are being followed. Wet cutting when possible.
- ✓ Effective dust collection and ventilation are in place.



CONFINED SPACE DEFINITIONS

A Confined Space is any enclosure that meets all the following criteria:

1. You can physically enter it.
2. Has limited or restricted means of entry or exit.
3. Is not designed for continuous occupancy.

CONFINED SPACE DEFINITIONS

A confined space that has one or more of the following characteristics is a

Required Confined Space:

1. Contains or has the potential to contain a hazardous atmosphere.
2. Contains a material that has the potential for engulfing an entrant;
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
4. Contains any other recognized serious safety or health hazard.



CONFINED SPACE REQUIREMENTS

- ✓ Know your company's Confined Space Program.
- ✓ Do not enter a confined space if you have not had training.
- ✓ Complete a Confined Space Permit before entry.
- ✓ Perform continuous air monitoring in the confined space.
- ✓ Ventilate the confined space before entry.
- ✓ Utilize non-entry rescue equipment. Example: tripod.

CONFINED SPACE REQUIREMENTS

- ✓ All confined spaces should be labeled.
- ✓ Maintain list of all confined spaces.
- ✓ Utilize an attendant during confined space entry.
- ✓ Do not enter a confined space without a rescue plan.
- ✓ Rescue teams should have specific training.
- ✓ Provide adequate communications for attendants and entrants.



CRANES & HOIST - GENERAL

- ✓ Documented operator training for the specific crane they operate.
- ✓ Training should include classroom training & practical hands on training.
- ✓ Post load charts in the cab and are used.
- ✓ Post recommended operating speeds & special hazard warnings visible from operator's station.
- ✓ Keep The operators' manual is in the cab.
- ✓ Comply with manufacturer's specifications and limitations.

CRANES & HOIST - GENERAL

- ✓ A Competent Person should perform a documented inspection before each use.
- ✓ A Qualified Person should perform an annual inspection & maintain records of dates & results are on file.
- ✓ Barricade the swing radius of the counter weight.
- ✓ Operate the crane with outriggers fully extended.
- ✓ Utilize adequate pads for the outrigger.
- ✓ The operator determines weight of load before performing lift.



CRANES & HOIST – GENERAL

- ✓ Use a flagger while moving a crane.
- ✓ Identify power line clearances.
- ✓ Maintain 20 feet or more clearance from overhead power lines.
- ✓ Use a flagman to signal crane operators when raising, lowering, & swinging the hook, loaded.
- ✓ An anti-two-block limit switch is in place and functional on all cranes.
- ✓ The crane, hook, and hoist equipment are free from defects.
- ✓ Secure the boom before leaving crane unattended.

CRANES & HOIST - GENERAL

- ✓ A Qualified Person makes/oversees repairs and adjustments.



ELECTRICAL SAFETY

SAFE WORK PRACTICES

- ✓ Follow all NFPA 70E and OSHA requirements when performing electrical work.
- ✓ Only qualified employees can perform electrical work.
- ✓ Identify arc flash hazard zones appropriate for panels – utilize appropriate warning barriers and signage.
- ✓ When working on exposed energized components, wear approved arc flash PPE & apparel.
- ✓ Follow NFPA 70E testing requirements for PPE.

ELECTRICAL SAFETY

- ✓ Utilize non-conductive tools when performing electrical work.
- ✓ Never leave open panels unattended.
- ✓ Follow all electrical hot work permitting processes.

CORDS & TOOLS

- ✓ Cord and plug equipment have documented inspections periodically.
- ✓ Cord and plugs are in good condition with no frays.
- ✓ Cord & plug equipment have ground pins.



ELECTRICAL SAFETY

- ✓ Extension cords are not used as permanent wiring.
- ✓ Extension cords are not run through holes, doors, etc.
- ✓ Unless it is double-insulated, all equipment grounded.
- ✓ Electrical cords are inspected and approved for the type of usage and are free of damage.
- ✓ Electrical cords are elevated over passage ways or are protected from damage.
- ✓ Electrical cords are secured using non-conducting materials.

ELECTRICAL SAFETY

- ✓ Buried temporary electrical cables are marked on the surface to avoid accidental contact.
- ✓ Repairs are done by persons trained and experienced.

EQUIPMENT

- ✓ Electrical panels have at least 36" clearance.
- ✓ Disconnects, panels, & breakers are labeled with the amount of voltage and the control source.
- ✓ Protective gear (rubber gloves, blankets, hot sticks, etc.) is inspected as required – an



ELECTRICAL SAFETY

independent testing firm inspects equipment as required.

- ✓ Live parts are guarded or protected against contact.
- ✓ GFCI-controlled outlets and panels are labeled.
- ✓ Light bulbs and florescent tubes 7 feet or below are guarded.
- ✓ Temporary electrical outlets, receptacles, junction boxes, and panels are electrically grounded.
- ✓ Panels, junction boxes, misc. equipment are not left open/unattended.

EMERGENCY RESPONSE

- ✓ Know who is qualified & trained in first aid & how to operate an AED.
- ✓ Know key personnel and contact numbers. They should be current, visible, & reviewed periodically.
- ✓ Know the critical parts of your documented emergency action plan.
- ✓ Become familiar with site alarms.
- ✓ Know your responsibilities in the site plan.
- ✓ Know where evacuation routes are posted.
- ✓ Know where to assemble if you evacuate.



EMERGENCY RESPONSE

- ✓ Know how to report an emergency.
- ✓ Know where to go for tornadoes or severe weather.
- ✓ Look for marked severe weather gathering points.
- ✓ Exits should be lighted and marked.
- ✓ Maintain clear access to all exits and routes to exits.
- ✓ All doors and exits should be labeled.
- ✓ Directions to exits should be visible.
- ✓ Know how to respond to all types of emergencies.

FALL PROTECTION

- ✓ Become familiar with the company Fall Protection Plan.
- ✓ Attend documented fall protection training.
- ✓ Use a safety harness and lanyard when exposed to fall hazards above 4 feet in General Industry and above 6 feet in Construction.
- ✓ Use fall restraint instead of fall arrest where possible. For example, use fall restraint in aerial lifts.
- ✓ Anchor Point 18.5 feet from the ground. Lanyard Length: 6 feet. Deceleration: 3.5 feet. Worker: 6 feet, Safety Factor: 3 feet from the ground.



FALL PROTECTION

- ✓ Wear and use the harness and lanyards correctly.
- ✓ Lanyards are equipped with shock absorbers.
- ✓ Lanyard hooks are provided with locking safety latch to prevent “roll out.”
- ✓ Attach lanyards correctly to facilitate tie-off and will support a force of 5,000-pound load.
- ✓ Fall protection equipment is inspected by a competent person.
- ✓ The equipment is tagged accordingly and documented for inspections.
- ✓ Fall protection equipment is used only for fall protection.

FALL PROTECTION

GUARDRAILS

- ✓ Standard guardrails for open sided platforms, wall openings, and scaffolding should have a top rail, mid-rails, and toe board.
- ✓ If there is a hole in the floor of a structure, the preferred method of protecting workers from falls is to cover the hole.
 - o Hole covers must be clearly marked, secured, & extended adequately beyond the edge.
 - o Covers must be strong enough to support twice the weight of anything that may drive on it.
 - o Do not store material on a hole.



FALL PROTECTION

HARNESSES

- ✓ The D-Ring or support point on the safety harness should be placed in the middle of the back.
- ✓ The harness must have a correct fit.
- ✓ All connections must be snug.
- ✓ The chest straps generally form an H or X pattern.
- ✓ The H strap should land between the bottom of the sternum and the belly button.
- ✓ Position the X strap at or just below the sternum.

FALL PROTECTION PFAS INSPECTIONS

- ✓ A personal fall arrest system should be inspected monthly by a competent person. The competent person should have the authority to correct hazards.
- ✓ Users should always perform a visual check before use.
- ✓ Inspect your harness and lanyards for; burns, hardening, excessive wear, cuts, rough spots, and frays.
- ✓ Inspect D-Rings and connectors for bends deformities.



FALLING OBJECTS

- ✓ Use tool lanyards when working at heights.
- ✓ Cover grating so that tools and materials cannot fall through.
- ✓ Haul materials in secured containers.
- ✓ Insure toe boards are in place.
- ✓ Conduct falling object focused audits daily to identify risk.
- ✓ Never stand beneath a load.
- ✓ Barricade hazard areas where overhead work is in progress.
- ✓ Post warning signs to inform other workers of falling object hazards.

FIRE EXTINGUISHERS

- ✓ PASS technique. Pull – Aim – Squeeze – Sweep.
- ✓ Classifications. (A – combustible fires, B – chemical fires, C – electrical fires, D – metal fires.
- ✓ Keep access to fire extinguishers clear at all times.
- ✓ Document fire extinguisher inspections monthly.
- ✓ Maintain fully charged extinguishers.
- ✓ Extinguishers are visible & marked.
- ✓ Good housekeeping prevents a build-up of combustible materials.



FIRE PREVENTION & FLAMMABLE STORAGE

- ✓ Know where your designated smoking areas are.
- ✓ Use a trained fire watch for welding, grinding and cutting operations.
- ✓ More than 25 gallons of flammable liquids have to be stored in an approved flammable cabinet.
- ✓ Do not store materials that react to water with flammables.
- ✓ Bond & ground containers when transferring flammable liquids.
- ✓ Locate portable storage tanks—liquid flammables at least 20 feet away from buildings.

FIRE PREVENTION & FLAMMABLE STORAGE

- ✓ Post NO SMOKING–NO OPEN FLAMES signs where flammable liquids are used.
- ✓ Do not store LPG containers inside buildings.
- ✓ Provide fire extinguishers where more than 5 gallons of flammable or combustible liquids are used.
- ✓ Maintain one 20-lb extinguisher at fuel dispensing areas.
- ✓ Store flammable liquids in flammable storage containers.



FLYING OBJECTS

- ✓ Use eye and face protection when using equipment or tools that produce flying objects. Example: Use eye and face protection when using a grinder.
- ✓ Ensure that protective guards are in place and in good condition.
- ✓ Make sure you are trained in the proper operation of pneumatic and powder-actuated tools.
- ✓ Use shielding to block flying debris.

HAND TOOLS

- ✓ Inspect tools before use.
- ✓ Mark defective tools out of service.
- ✓ Use the correct tool for each job.
- ✓ Store and carry tools properly.
- ✓ Maintain all guards & safety features.
- ✓ Do not use home-made tools.
- ✓ Keep guards in place.
- ✓ Wear proper PPE when using tools.
- ✓ Provide adequate tools.
- ✓ Locate your tools convenient to the job.



HAND TOOLS

- ✓ Operate tools in a safe manner.
- ✓ Store and carry tools properly.
- ✓ Chisels, hammer wrenches, and other striking tools are dressed at the striking end.
- ✓ Electric power-operated tools are grounded or double insulated?
- ✓ Wear the correct eye and face protection for the hazard.
- ✓ Circular saws have an auto-return guard above & below the base plate; the guard is NOT tied up (not functional).

HAZARD COMMUNICATION (GHS)

- ✓ OSHA requires companies to have a written Hazard Communication program.
- ✓ Companies have to maintain a list of chemicals.
- ✓ Each Company should maintain Safety Data Sheets on all chemicals.
- ✓ Employees have a right to understand the chemical hazards.
- ✓ Know where to find the program, the list of chemicals, and the SDS's.
- ✓ Containers should be labeled stating the contents and hazards.



HAZARD COMMUNICATION (GHS)

- ✓ All secondary containers should have labels.
- ✓ Know & understand the meaning of OSHA's GHS labeling.
- ✓ Store chemicals in proper locations.
- ✓ Use chemicals as intended.
- ✓ Review the SDS if you are unsure about the hazards.
- ✓ Use the recommended PPE.
- ✓ Know the location of eye wash & showers.
- ✓ Know how to treat overexposure.

HEARING CONSERVATION

- ✓ Use feasible engineering and administrative controls to keep noise exposures within allowable limits.
- ✓ A hearing Conservation Program is required for sound levels that exceed an eight-hour exposure of 85 decibels.
- ✓ Know where hearing protection is required.
- ✓ Wear hearing protection properly.



HIGH PRESSURE CLEANING

- ✓ Use rain suits, gloves, face shields, hard hats, safety glasses, and rubber steel toe boots.
- ✓ Do not put any part of your body in front of the water jet.
- ✓ Do not handle the hose within one foot of hose-to-hose connections.
- ✓ Operators should be trained annually at a minimum.
- ✓ Clean, dismantle, isolate, lock, and tag as required.

HIGH PRESSURE CLEANING

- ✓ Keep documentation showing a 3 to 1 safety factor against bursting.
- ✓ Barricade the work area - at a minimum of 15 feet - and place warning signs stating "DANGER-HIGH PRESSURE WATER CLEANING."
- ✓ Maintain records of high-pressure water cleaning equipment inspections.
- ✓ Check water quality to make sure it does not contain bacteria dangerous to people.



HOUSEKEEPING

Everything with a purpose has a place. It should be in its place clean & ready for use.

- ✓ Keep work areas & walkways clear.
- ✓ Clean slippery walking surfaces to avoid slip & trip hazards.
- ✓ Keep trash off of the floor and off of work surfaces.
- ✓ Keep cords and hoses off of the ground to avoid trip hazards.
- ✓ Maintain all tools in an orderly fashion.
- ✓ Store all materials in an orderly fashion.

HOUSEKEEPING

- ✓ Clean work areas daily.
- ✓ Insure all chemicals are stored properly and monitor potential leaks.
- ✓ Maintain work tables in a clean and orderly fashion.
- ✓ Keep work trucks in a clean and orderly fashion.
- ✓ No excess material or tools in the area.



HUMAN MACHINE INTERFACE

- ✓ Utilize pedestrian walkways.
- ✓ Mark pedestrian walkways.
- ✓ Separate pedestrians & equipment.
- ✓ Signage should be highly visible.
- ✓ Post signs & avoid restricted areas.
- ✓ Establish eye contact with drivers.
- ✓ Wear high visibility clothing (vest).
- ✓ Stop for passing traffic.
- ✓ Look both ways.
- ✓ Observe the speed limit.

HUMAN MACHINE INTERFACE

- ✓ Give pedestrians the right of way.
- ✓ Establish eye contact pedestrians.
- ✓ Know your blind spots.
- ✓ Do not drive in restricted areas.
- ✓ Utilize your horns.
- ✓ Utilize mirrors.
- ✓ Do not drive through high traffic areas without a spotter.
- ✓ Report damage.



INCIDENT PROTOCOL

All incidents that caused or could have caused an injury should be reported to your immediate supervisor immediately. Follow the site specific protocols for notifying emergency services.

REPORT THE FOLLOWING INCIDENT CATEGORIES

- ✓ **Near Miss** – An event where there was a potential for injury but no one was hurt.
- ✓ **Property Damage** – Damage to tools, equipment, or materials but no one was hurt.

INCIDENT CATEGORIES

CONTINUED

- ✓ **Minor Injury or First Aid Injury**
– A minor cut, bruise or strain requiring only first aid treatment.
- ✓ **Serious Injury or OSHA Recordable** – Injuries that require medical treatment such as stitches, prescription medication, fractures, or the employee misses time at work.
- ✓ **Fatality** – Events that result in a loss of life.



LADDER SAFETY

- ✓ Attend ladder safety training.
- ✓ Inspect ladders before use.
- ✓ Maintain ladders in good condition.
- ✓ Use ladders for intended purposes.
- ✓ Secure ladders when used.
- ✓ Maintain a stable 4 to 1 ratio.
- ✓ Ladders extend 36" above landing.
- ✓ Use non-conductive ladders performing electrical work.
- ✓ Maintain 3 points of contact.
- ✓ Do not work from the top rung.

LADDER SAFETY

- ✓ Do not use the top 3 rungs of an extension ladder and the top 2 rungs of a step ladder.



LEAD

- ✓ Become familiar with your written Compliance Plan.
- ✓ Know how to identify potential lead.
- ✓ Train workers with potential exposure to lead.
- ✓ Wear the proper PPE when there is the potential for exposure.
- ✓ Engineering and administrative controls are required to be in place.
- ✓ Exposure monitoring is required.
- ✓ Medical surveillance should be provided to exposed workers.
- ✓ Required records maintained.

LOCKOUT TAGOUT - ENERGY CONTROL

- ✓ Lockout prevents the sudden release of energy.
- ✓ OSHA requires specific steps when servicing or maintaining equipment.
- ✓ When you have to remove a guard or place any part of your body into a hazard zone, lockout is required.
- ✓ The standard requires a written program, equipment specific procedures, training, & hardware.



LOCKOUT - STEPS

- ✓ Identify all energy sources and know their magnitude.
- ✓ Notify all affected employees.
- ✓ Follow proper shut down procedures.
- ✓ Isolate ALL energy sources.
- ✓ Apply a lock & tag on ALL sources.
- ✓ Release ALL stored energy.
- ✓ Verify equipment is de-energized.
- ✓ Follow group lockout procedures.
- ✓ Follow the proper start up procedures after putting all guards back on equipment.

MACHINE GUARDING REQUIREMENTS

- ✓ If you can get caught, crushed, pinched, cut, punctured, bruised, or severely injured by moving equipment, guards are required that prevent access.
- ✓ All guards have to be permanently affixed to the piece of equipment to limit access.
- ✓ Guards have to be sturdy and stable.
- ✓ No one is allowed to remove guards or operate equipment without guards.



MACHINE GUARDING REQUIREMENTS EXAMPLES

- ✓ Chain and sprockets require guards.
- ✓ Belt drives require guards.
- ✓ Pinch points & point of operations require guards.
- ✓ Couplings require guards.
- ✓ Conveyor pinch points require guards.
- ✓ Interlocks, emergency stops, pull cords, and light curtains operational.

MATERIAL HANDLING & STORAGE

- ✓ Maintain aisles and passageways clean and unobstructed.
- ✓ Securely store materials to prevent displacement and falling.
- ✓ Use material handling equipment to handle/move material when possible.
- ✓ Wear gloves to protect hands when handling materials.
- ✓ Identify any hazards with materials and chemicals with SDSs.
- ✓ Use secondary containment for storage of hazardous materials.
- ✓ Store hazardous materials appropriately in approved areas.



MOBILE EQUIPMENT PROGRAM & TRAINING

- ✓ Become familiar with the written program & training requirements.
- ✓ Operators should have current documented training.
- ✓ Training includes a classroom component.
- ✓ Training includes a documented skills verification.
- ✓ Training is equipment specific.

SAFETY REQUIREMENTS

- ✓ Only one person can ride on mobile equipment such as a forklift.

MOBILE EQUIPMENT

- ✓ Apply parking brake when parked.
- ✓ Sound the horn at intersections & blind spots.
- ✓ Look in the direction of travel.
- ✓ Use equipment for intended purpose.
- ✓ Do not block emergency equipment.
- ✓ Carry loads against the mass.
- ✓ Come to a complete stop at intersections & blind spots
- ✓ Turn the ignition off when parked.
- ✓ Keep arms and legs inside the cage at all times.



MOBILE EQUIPMENT

- ✓ Complete an equipment inspection and checklist before use.
- ✓ Maintain & inspect fire extinguishers.
- ✓ Wear the seatbelt.
- ✓ Operate at safe speeds.
- ✓ Use the horn at all blind spots.
- ✓ Center and tilt loads properly.
- ✓ Verify the backup alarm works.
- ✓ Verify the horn works.
- ✓ Verify the brakes work.

MOBILE EQUIPMENT

- ✓ Verify the parking brakes work.
- ✓ Inspect all hoses before use.
- ✓ Operators should have training on how to change & fill propane tanks.
- ✓ Wear a face shield & gloves when changing and filling propane tanks.
- ✓ Propane storage signage should include. (No Smoking, Flammable)
- ✓ Store propane tanks in designated places.
- ✓ Train operators to change batteries.
- ✓ Eyewash & showers should be accessible & inspected monthly.



MOBILE EQUIPMENT

- ✓ Battery changing areas should have proper signage. (No Smoking)
- ✓ Wear gloves, face shield, & apron when changing fluids in the batteries.
- ✓ Utilize proper lifting assist when shifting batteries.
- ✓ Secure trailers before entering.
- ✓ Chock or utilize dock lock system.
- ✓ Verify supports are in place.
- ✓ Put dock plates in place.
- ✓ When a trailer is not parked at the dock, put standard railing in place or keep the door closed.

OSHA FOCUS FOUR

The Focus Four is an OSHA special emphasis program. The four categories represent the four most common causes of fatal accidents.

Falls – 34.6% of Fatalities

These fatalities are the result of falls from elevation. The failure to have adequate guardrails or fall protection are contributing factors.

Critical Points to Remember:

- ✓ Use fall protection when exposed to falls more than 4 feet high.
- ✓ Cover and secure floor openings and label floor opening covers.
- ✓ Use ladders and scaffolds safely.



OSHA FOCUS FOUR

Struck-By – 9.8% of Fatalities

These fatalities are the result of workers being struck by things such as but not limited to vehicles, machines, or unsafe rigging operations.

Critical Points to Remember:

- ✓ Never position yourself between moving and fixed objects.
- ✓ Wear high-visibility clothes near equipment/vehicles.

Caught In – 1.6% of Fatalities

These fatalities include events where workers are caught in machines, trenches, confined spaces or other potentially dangerous equipment.

OSHA FOCUS FOUR

Critical Points to Remember:

- ✓ Never enter an unprotected trench or excavation 5' or deeper without an adequate protective system in place.
- ✓ Make sure the trench or excavation is protected either by sloping, shoring, benching or trench shield systems.
- ✓ Follow confined space permitting requirements.
- ✓ Never perform serving & maintenance without lockout.



OSHA FOCUS FOUR

Electrocutions – 8.1% of Fatalities

These fatalities include events where workers came in contact with energized electrical equipment such as but not limited to overhead power lines, exposed wires, defective tools, electrical cabinets, and other miscellaneous electrical equipment.

Critical Points to Remember:

- ✓ Locate and identify utilities before starting work.
- ✓ Look for overhead power lines when operating any equipment
 - Maintain a safe distance away from power lines.
- ✓ Do not operate portable electric tools unless they are grounded or double insulated.

OSHA FOCUS FOUR

- ✓ Use ground-fault circuit interrupters for protection.
- ✓ Enclose energized parts.



PERSONAL PROTECTIVE EQUIPMENT

- ✓ Wear appropriate aprons when exposed to corrosive materials.
- ✓ Wear chemical gloves when working with hazardous chemicals.
- ✓ Wear a face shield when exposed to hazards such as sparks and corrosive chemicals.
- ✓ Wear a respirator when exposed to airborne hazards above permissible exposure limits.
- ✓ Wear cut resistant gloves when exposed to sharps.
- ✓ Wear fall protection when exposed to heights.

PERSONAL PROTECTIVE EQUIPMENT

- ✓ Know how to wear and store PPE properly.
- ✓ Wear hearing protection when exposed to noise levels over 85db.
- ✓ Wear a hardhat in all posted areas.
- ✓ Wear shoes with a steel or composite toe to protect the feet from dropped objects.
- ✓ For designated activities, wear approved high visibility vest or apparel.



POWER ACTUATED TOOLS

- ✓ Workers using powder-actuated tools should be trained and certified.
- ✓ Know and use correct load strengths.
- ✓ Remove loads while the tool is stored or left unattended.
- ✓ Wear the proper PPE to include hard hat, face shield, safety glasses, and hearing protection.
- ✓ Store the tool and loads in a locked cabinet.
- ✓ Inspect the tool on a regular basis and tagged to show that it has been inspected.

POWER TOOLS

- ✓ Inspect tools on a regular basis.
- ✓ Inspect cord and plugs for damage.
- ✓ Do not modify tools or use outside of their designed purpose.
- ✓ Use appropriate tools for the job.
- ✓ Tag defective tools with a “DANGER” tag and take out of services.
- ✓ Use the proper PPE for the tool.
- ✓ Keep the guards in place and functional. (Example: Grinders should have a handle and guard.)



POWER TOOLS

- ✓ Properly anchor equipment (such as drill presses and bench grinders).
- ✓ Inspect gasoline-powered tools and equipment for fuel leaks.
- ✓ Fire extinguishers are available while refueling equipment.
- ✓ Circular saws should have an exhaust hood or a guard to prevent accidental contact.
- ✓ Have an adjustable stop or sufficiently wide table so saw blade doesn't pass the edge of the table.

PRE-PLANNING TOOLS

- ✓ **Job Safety Analysis (JSA)** The activity consist of breaking a job into component tasks and then analyzing each step for potential hazards.
 - o Identify each step of your job.
 - o Anticipate the hazards associated with the steps.
 - o Put controls in place to prevent accidents.
 - o Identify all safety precautions required for that job; permits, PPE, training, procedures, etc.



PRE-PLANNING TOOLS

- ✓ **Safety Task Analysis (STA)**
The purpose is to identify risk and controls for day to day individual task.
 - o Identify the hazards in the area.
 - o Plan what tools and PPE you will need.
 - o Coordinate work around other crews.
 - o Plan for permits, training, and miscellaneous requirements.

PRE-PLANNING TOOLS

- ✓ **Individual Risk Assessments;**
Risk is the measure of the probability, consequences, and exposure related to an event.
- ✓ Evaluate your risk by asking yourself the following questions:
 - o What could go wrong?
 - o How bad could it be?
 - o Has anything changed?
 - o Am I physically and mentally ready?
 - o Do I clearly understand my task?
 - o Do I have the right tools and equipment?

**STOP IF IT CAN'T BE DONE
SAFELY!**



RESPIRATOR PROTECTION

- ✓ Become familiar with the company respiratory protection program if there is the potential need for respirator protection.
- ✓ Before wearing a respirator, fit testing is provided for workers.
- ✓ Companies should provide workers a choice of at least 2 different makes, models, and/or sizes of respirators.
- ✓ Before wearing a respirator, workers should have training.
- ✓ Perform a seal check before using a respirator.
- ✓ Operators perform periodic inspections that are documented.

RESPIRATOR PROTECTION

- ✓ Breathing air for supplied air respirators should meet breathing air requirements.
- ✓ Breathing air supplies are equipped with a proper filtration system, CO alarm, reserve air tank, and compressor failure alarm.
- ✓ Hose couplings used with supplied air respirators are not intermingled with other couplings.
- ✓ Breathing air cylinders are labeled as required.
- ✓ Respiratory protection equipment is properly cleaned, sanitized, and stored after being used.
- ✓ Medical clearance is required to wear a respirator.



RIGGING EQUIPMENT

- ✓ Rigging equipment is visually inspected before use.
- ✓ Documented inspections are conducted periodically.
- ✓ Riggers should be qualified to perform the work.
- ✓ Riggers who act as “signal persons” have signaling training.
- ✓ Utilize softeners to protect wire and nylon chokers from damage.
- ✓ Remove damaged slings from service.
- ✓ Maintain a data plate or tag on all slings.

SCAFFOLDING

- ✓ Scaffold erection is supervised by a Competent Person.
- ✓ Scaffolds are inspected on each shift before use by a Competent Person.
- ✓ Scaffolding has adequate access/ egress.
- ✓ Guardrails and toe boards are provided on all open sides and ends.
- ✓ Scaffolds have a top guard rail, mid rail, and toe board.
- ✓ Tags are used to identify scaffolds conditions (green, yellow & red).
- ✓ Yellow tags include requirements for safe access & use.



SCAFFOLDING

- ✓ Complete decking is provided whenever possible - and is of “scaffold-grade” material.
- ✓ Workers who erect and dismantle scaffolds are trained.
- ✓ Components are capable of supporting at least four times the maximum intended load.
- ✓ Planks extend over end supports not less than 6 inches nor more than 18 inches.
- ✓ Properly braced so that scaffolds are always plumb, square, & rigid.
- ✓ Broken, bent, excessively rusted, altered, or damaged scaffolding is removed from service.

SCAFFOLDING

- ✓ Scaffolds are free of defects and are built per specifications.
- ✓ Overhead protection is provided with exposure from falling objects
- ✓ Scaffolds are secured to the structure when the height exceeds 4 times the minimum base dimension.
- ✓ An appropriate base is provided.
- ✓ Boards/planks are secured.
- ✓ Components are not interchanged between manufacturers/type.
- ✓ The mobile scaffold casters are locked and pinned.



SHOP EQUIPMENT

GRINDERS

- ✓ Work rests are adjusted within 1/8 of an inch from the wheel.
- ✓ Tongue guards are adjusted 1/4 of inch from the wheel.
- ✓ Discs are compatible with the equipment's maximum/rated RPM.
- ✓ Discs are ring-tested before use.
- ✓ Disks are properly stored.

TABLE SAWS

- ✓ Have an upper blade guard.
- ✓ Have a spreader.

SHOP EQUIPMENT

- ✓ Have non-kickback fingers or dogs.
- ✓ Have anti-restart.

RADIAL ARM SAW

- ✓ Have upper and lower blade guards?
- ✓ Have an adjustable stop or sufficiently wide table so saw blade doesn't pass the edge of the table.



SIGNS, BARRICADES

- ✓ Use accident prevention signs, symbols, and tags that meet common colors and designs.
 - o Blue – Informational Signs.
 - o Green – General suggestions and instructions.
 - o Yellow – Caution markings that tell you about general hazards.
 - o Red, Black, White – Danger markings that tell you an immediate hazard exist.
- ✓ Use sufficient barricade methods to prevent unauthorized entry.
 - o Red = DANGER
 - o Yellow = CAUTION
 - o Yellow/purple = RADIATION

STEEL ERECTION

- ✓ Become familiar with your companies Steel Erection Plan.
- ✓ Plan proper tie-off into the job.
- ✓ Meet all bolt-up requirements.
- ✓ Use bolt buckets to contain bolts.
- ✓ Meet all decking requirements.
- ✓ Use approved rigging techniques.
- ✓ Put perimeter cables or standard guardrails in place.
- ✓ Elevated areas are free of loose excess material and debris that could fall to levels below.



STEEL ERECTION

- ✓ Post barricades and signs in the area to warn workers.
- ✓ Workers providing hand signals have received signal-person training.
- ✓ Provide correct signals or warnings when loads are raised.
- ✓ Workers wearing required PPE.
- ✓ Use taglines to control movement of all suspended loads.
- ✓ Secure floor grating sections.

SUSPENDED WORK PLATFORM

- ✓ Only use a platform when conventional means are more hazardous or impossible.
- ✓ Utilize a permit for suspended work basket usage.
- ✓ Cranes have a boom angle indicator.
- ✓ The crane has a device to indicate boom length.
- ✓ The crane has an anti-tube lock.
- ✓ The platform is used for raising personnel only as required.
- ✓ The platform is labeled to show: max. weight capacity, max. number of persons, & total basket weight.



TRAFFIC CONTROL WORK ZONES

- ✓ Cones, barrels, jersey barriers, etc. are in place per the Plan.
- ✓ Signs are in place and legible.
- ✓ Crash cushions are in place.
- ✓ There is proper spacing for buffer zones & channeling devices.

FLAGGERS

- ✓ Are trained & certified.
- ✓ Use common signaling methods & apparatus (paddles, paddles with lights, or flags).

TRAFFIC CONTROL

- ✓ Wear approved high visibility clothing with reflective material.
- ✓ Drivers are warned with signs that there will be flaggers ahead.

LIGHTING

- ✓ Flagger stations should be illuminated.
- ✓ General area lighting is at least 5-foot-candles.
- ✓ Where available lighting is not sufficient, flares or chemical lighting should be used.
- ✓ Glare should be controlled or eliminated.



TRENCHING & EXCAVATION

- ✓ A Competent Person should be designated for each excavation/ trench operation.
- ✓ A Competent Person should inspect the excavation/trench daily before occupancy & after rain or snow-melt.
- ✓ Locate underground utilities before beginning any excavation or trench.
- ✓ Excavation permits document critical safety measures are in place.
- ✓ Maintain spoil dirt at least 2 feet from the edge of the excavation.

TRENCHING & EXCAVATION

- ✓ Trenches & excavations have the correct slope angle, shoring, or trench box.
- ✓ Provide proper access and egress every 25 feet.
- ✓ Erect approved barricades at the edge of all open trenches and excavations.
- ✓ Fall protection is provided where required.
- ✓ Know how to classify soil types.



VEHICLE HAZARDS

- ✓ Stay alert at all times and keep a safe distance from vehicles and equipment.
- ✓ Maintain eye contact with vehicle or equipment operators to ensure that they see you.
- ✓ Never get into the blind spots of equipment operators.
- ✓ Keep off of mobile equipment unless authorized.
- ✓ Wear reflective or high-visibility vests or other suitable garments.
- ✓ Never stand between pieces of equipment unless they are secured.

VEHICLE HAZARDS

- ✓ Never stand under loads handled by lifting or digging equipment, or near vehicles being loaded or unloaded.
- ✓ When a vehicle is operated indoors, the carbon monoxide in the exhaust can kill or sicken anyone in the vicinity unless there is good ventilation.
- ✓ Make sure there is adequate ventilation before operating a motorized vehicle or equipment, such as a generator, indoors.



WALKING & WORKING SURFACES

- ✓ Open-sided platforms 4' or more above an adjacent floor has a standard guardrail.
- ✓ Holes are covered, secured and labeled.
- ✓ Hatchway and floor openings are guarded AND appropriately labeled.
- ✓ Covers or guardrails are provided to prevent falling into drainage ditches, open pits, vats, tanks, etc.
- ✓ Fixed stairways are at least 22 inches wide.
- ✓ Stairways with 4 or more risers have standard railing on open sides.

WALKING & WORKING SURFACES

- ✓ Stairways with a width 88 inches or more have a center stair railing.
- ✓ A seven-foot vertical clearance is maintained above stair treads.
- ✓ Walking surfaces are kept clear and free from slip and hazards.
- ✓ There are no protruding nails in the walking surface.
- ✓ Load limit weights are posted in storage areas.
- ✓ Aisles and passageways are appropriately marked and kept clear.
- ✓ Adequate lighting is provided in work areas.



WELDING, CUTTING, HEATING, BURNING, SOLDERING

GENERAL

- ✓ Hot work permits are in place.
- ✓ There is a dedicated Fire Watch that has had the proper training.
- ✓ Fire Watch monitors the area 30 minutes after the work is complete.
- ✓ There are no flammable or combustible materials within 35 feet.
- ✓ A fire extinguisher is immediately available and operable.
- ✓ Fire hazards in the vicinity of welding or cutting been removed or guarded.

WELDING, CUTTING, HEATING, BURNING, SOLDERING

- ✓ Used drums, barrels, tanks, or other containers are thoroughly cleaned – no flammable materials or toxic vapors can occur.
- ✓ Confined spaces are adequately ventilated.
- ✓ Mechanical ventilation is provided in welding or cutting areas.
- ✓ Strikers are used to light torches.
- ✓ Hot slag & sparks are controlled to prevent fires & contact with workers.
- ✓ Wear appropriate PPE; sleeves, apron, eye/face protection, gloves, and boots.



WELDING, CUTTING, HEATING, BURNING, SOLDERING

- ✓ Use welding screens.
- ✓ Workers perform with a required electrical ground.
- ✓ Rods are stored and rod stubs are placed in a container to prevent a tripping hazard.
- ✓ Rods are not left in the electrode/rod holder while not in use.
- ✓ Inspect equipment before use.

CABLES are...

- ✓ Free of damage & non-insulated connections.
- ✓ Inspect cables on a regular basis.

WELDING, CUTTING, HEATING, BURNING, SOLDERING

- ✓ Suspended or secured using nonconductive materials.
- ✓ Elevated or protected to prevent tripping hazards.
- ✓ Not used if spliced within 10 feet of the holder
- ✓ Replaced when the insulation is damaged or conductors bare.

COMPRESSED GAS CYLINDERS

- ✓ Are legibly marked.
- ✓ Acetylene cylinder valves opened no more than one and one-half turns of the spindle.
- ✓ Are stored upright, secured & capped.



WELDING, CUTTING, HEATING, BURNING, SOLDERING

- ✓ Oxygen & fuel-gas cylinders are separated by partition or 20 feet
- ✓ Workers use reverse flow or
- ✓ Flashback arrestors on all oxygen/ acetylene rigs.
- ✓ Regulator gauges are attached and in good condition.
- ✓ Valves are turned off when not in use for extended periods of time.
- ✓ Cylinders are not exposed to slag or sparks.
- ✓ Transported in a secure/upright position—with regulators removed and valve protection caps in place.

WELDING, CUTTING, HEATING, BURNING, SOLDERING

- ✓ Are hoisted only in a secured manner.
- ✓ Cylinders are not placed or stored such that they may become part of an electrical circuit.
- ✓ Cylinders are not stored near piping systems/layout tables used for grounding electrical circuits.
- ✓ NO SMOKING signs are posted in storage areas.

HOSES are...

- ✓ Free of oil and grease.



WELDING, CUTTING, HEATING, BURNING, SOLDERING

- ✓ Inspected and are free of damage.
- ✓ Properly secured to prevent displacement.
- ✓ Have a positive means of coupling to prevent uncoupling while in use.
- ✓ Have containment fittings to prevent whipping.

