

ServiceBoss International, Inc.

Safety Program

SECTION III

SPECIFIC COMPLIANCE PROGRAMS

Exposure Control Plan for Bloodborne Pathogens & Other Infectious Materials

Fall Protection

Hazard Communication

Personal Protective Equipment: General

Scaffold & Ladder

ServiceBoss International, Inc.

**EXPOSURE CONTROL PLAN
for
BLOODBORNE PATHOGENS & OTHER INFECTIOUS MATERIALS**

ServiceBoss International, Inc.

NOTE

Per CPL 2-2.69, Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens, the bloodborne pathogens standard does not apply to the construction industry. OSHA has not, however, stated that the construction industry is free from the hazards of bloodborne pathogens. Exposure to bloodborne pathogens would fall under Section 5(a)(1) of the OSH Act which states that "each employer shall furnish to each of his employees employment and a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents and only at the location where the incident occurred.

Recordkeeping: all work-related injuries from needlesticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person's blood or other potentially infectious materials (OPIM) are to be recorded on the OSHA 300 as an injury.

Note: Our first aid kits do not contain sharps or needles. However, a contaminated sharp, such as a broken pair of glasses, may trigger the above.

- a. To protect the employee's privacy, the employees name may not be entered on the OSHA 300.
- b. If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.

ServiceBoss International, Inc.

Safety Program

SECTION III

EXPOSURE CONTROL PLAN for BLOODBORNE PATHOGENS & OTHER INFECTIOUS MATERIALS

INDEX

<u>Page</u>	<u>Topic</u>
1	POLICY STATEMENT
1	DEFINITIONS
4	EXPOSURE CONTROL PLAN
5	EXPOSURE DETERMINATION
5	METHODS OF COMPLIANCE
9	EXPOSURE CONTROL PLAN ADMINISTRATOR
10	DESIGNATED FIRST AID PROVIDERS
10	PERSONAL PROTECTIVE EQUIPMENT (PPE)
12	HOUSEKEEPING
12	HEPATITIS B EPIDEMIOLOGY
13	RISK OF EXPOSURE
14	HEPATITIS B VACCINATION
14	SHARPS INJURY LOG
15	FIRST AID PROVIDER'S INPUT
15	PLAN REVIEW
15	POST-EXPOSURE EVALUATION AND FOLLOW-UP
17	RECORDKEEPING
18	TRAINING
20	WASTE MANAGEMENT
20	SUMMARY

OSHA Standards:

29 CFR 1910.1030, Bloodborne Pathogens

Forms:

[Found immediately following this program]

Exposure Determination: Lists I, II, & III

Housekeeping Schedule & Checklist

Hepatitis B Vaccination Declination

Sharps Injury Log

Annual Exposure Control Plan Review

Exposure Incident Report

POLICY STATEMENT

This Exposure Control Plan has been developed to eliminate or minimize the risk of exposure to bloodborne pathogens and other potentially infectious materials. This Plan presents methods and procedures to eliminate and/or minimize the hazards associated with occupational exposure to bloodborne pathogens or other infectious materials.

As a matter of policy, universal precautions will be used.

Additional components of this Plan include exposure determinations by job classification, standard operating procedures to eliminate or reduce the likelihood of disease transmission, the methods of disease transmission, definitions of terms, post exposure procedures and follow-up, training documentation, and recordkeeping.

Compliance with this Plan not only fulfills the requirements of the Occupational Safety and Health Administration, more importantly, it fulfills our desire to maintain a safe working environment and safeguard the health of our employees.

All affected employees should feel free to review this Plan at any time and are encouraged to consult with our Exposure Control Plan Administrator to resolve any issues affecting its implementation. Immediately following our Exposure Control Plan is a copy of 29 CFR 1910.1030, Bloodborne Pathogens. Our Plan is to be made available to the Assistant Secretary of Labor for Occupational Safety and Health or designated representative.

DEFINITIONS

All employees should know the "language" of this plan. Because some of the words and/or terms are not used in everyday life, each person must be aware of the definitions so that we are all "reading off the same page". Below are OSHA definitions:

Assistant Secretary: the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood: human blood, human blood components, and products made from human blood.

Bloodborne Pathogens: pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory: a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated: the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry: laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps: any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination: the use of physical or chemical: to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Director: the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Engineering Controls: controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident: a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Handwashing Facilities: a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional: a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph 29 CFR 1910.1030(f), Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up, a copy of which follows this section.

Note: The above activities include actually providing Hepatitis B vaccine, ordering appropriate laboratory test, determining contraindications to vaccination, providing post-exposure prophylaxis and counseling. The legal scope of practice for this professional must allow the independent performance of all the procedures described in paragraph (f), Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV: hepatitis B virus.

HIV: human immunodeficiency virus.

Needleless systems: a device that does not use needles for:

- a. The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;
- b. The administration of medication or fluids; or
- c. Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure: reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials:

- a. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
- b. Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and
- c. HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral: piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility: a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste: liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory: a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharps with engineered sharps injury protections: a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual: any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize: the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls: controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

EXPOSURE CONTROL PLAN **[29 CFR 1910.1030(c)]**

This Exposure Control Plan is provided for all personnel who, as a result of the performance of their duties, would have reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials.

This Plan will be reviewed and updated annually and whenever necessary as new or modified tasks and procedures are introduced which affect occupational exposure to bloodborne pathogens or other potentially infectious materials. The review and update of this plan will:

- a. reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens.
- b. document, annually, consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

First aid providers employees responsible for direct trauma victim care who are potentially exposed to injuries for contaminated sharps will be asked for input in the identification, evaluation, and selection of effective engineering and work practice controls.

This Exposure Control Plan, with a copy of 29 CFR 1910.1030, Bloodborne Pathogens, will be made accessible to all employees as well as the Assistant Secretary and the Director (see definitions) who may examine and copy this plan.

EXPOSURE DETERMINATION

Three (3) lists will be prepared and they will be maintained in Section II of this plan.

- List I:** A list of all job classifications in which all employees have occupational exposure.
- List II:** A list of job classifications in which some employees have occupational exposure.
- List III:** A list of all tasks and procedures or groups of closely related tasks and procedures in which occupation exposure occurs and are performed by employees in job classifications noted in List II.

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

METHODS OF COMPLIANCE

Universal precautions will be used. We will treat all trauma victims' blood, bodily fluids, and other potentially infectious materials as if they are known to be infectious. Unfortunately, there is no immediate, practical way to determine if HIV, HBV, and other bloodborne pathogens are present so, to be safe, we will assume they are. Traditionally, isolation of infectious materials has been diagnosis-driven. This meant that if a person were diagnosed to have HIV or HBV infection, for example, then isolation precautions would be taken. Because the infection status of each trauma victim cannot be immediately known, it makes sense to treat all trauma victims and their body fluids as if they were infected. The precautions to take depend on the procedures being performed. For example, if one's hands will be in contact with body substances, disposable gloves will be worn. If there is risk of one's eyes being splashed with body fluids, eye protection will be worn. An impermeable barrier must be placed between yourself and the potentially infectious bodily fluids. Overkill is not necessary. Cleaning up a minor spill on a counter top does not require a

mask, eye protection, and plastic apron. It does, however, require disposable gloves.

All employees will strictly adhere to the below engineering and work practice controls to eliminate or reduce the possibility of occupational exposure to bloodborne pathogens or other potentially infectious materials. Specific controls and procedures, noted below, will be used to eliminate or minimize employee exposure. If occupational exposure is:

HANDWASHING EQUIPMENT AND PROCEDURES: Handwashing facilities are provided which are readily accessible to all employees.

Employees will wash their hands and any other skin area exposed to blood or other potentially infectious materials with soap and water immediately or as soon as feasible:

- a. after removal of gloves or other personal protective equipment.
- b. following contact with blood or other potentially infectious materials.

Particular attention will be given to fingernails and between fingers and rings under which infectious material may lodge. Furthermore, one should be aware that rings and jewelry are a good hiding place for bloodborne pathogens and other potentially infectious materials.

Examples of situations where handwashing is appropriate:

- a. before and after examining any trauma victim.
- b. after handling any soiled waste or other materials.
- c. after handling any chemicals or used equipment.

If for some reason handwashing facilities are not functioning, appropriate antiseptic hand cleaner and clean cloth/paper towels (antiseptic towelettes) will be provided and used. If antiseptic hand cleaner and clean cloth/paper towels are used, hands will be washed with soap and water as soon as feasible.

EATING, DRINKING, SMOKING:

There shall be no eating, drinking, smoking, applying cosmetics or lip balm, or handling contact lenses in areas where there is a likelihood of occupational exposure to bloodborne pathogens or other potentially infectious materials.

Furthermore, food and drink shall not be kept in refrigerators, freezers, shelves, cabinets, or on countertops or benches where blood or other potentially infectious materials are present.

CONTAMINATED NEEDLES & OTHER CONTAMINATED SHARPS:

Contaminated needles will not be sheared, or broken.

Furthermore, all contaminated needles and other contaminated sharps shall not be bent, recapped, or removed unless:

- a. it can be demonstrated that no alternative is feasible or that it is required by a specific medical procedure.
- b. recapping or needle removal may be accomplished through the use of a mechanical device or a one-handed method.

Contaminated **reusable** sharps will be placed in appropriate containers immediately or as soon as possible after use until properly reprocessed. These containers will:

- a. be puncture resistant.
- b. have warning labels affixed to containers potentially infectious material and contain the following legend:



Note: The above label will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Red bags or red containers may be substituted for labels.

- c. be leakproof on the sides and bottom.

Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

Contaminated **non-reusable** sharps will be discarded immediately or as soon as feasible and placed in containers that:

- a. are closable
- b. are puncture resistant.
- c. are leakproof on sides and bottom.
- b. have warning labels affixed that contain the following legend:



Note: The above label will be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Red bags or red containers may be substituted for labels.

Contaminated **reusable** sharps shall not be stored or processed in such a manner that requires employees to reach by hand into the containers where these sharps have been placed.

During use, containers for contaminated sharps must be:

- a. easily accessible to our employees.
- b. located as close as feasible to the immediate area where sharps are used or can be reasonably anticipated to be found.
- c. maintained upright throughout use.
- d. replaced routinely and not be allowed to overflow.

If leakage is possible when removing a container of contaminated sharps, it shall be placed in a second container with the following container requirements:

- a. it will be closable.
- b. it will be constructed to contain all contents and prevent leakage during handling, storage, transport or shipping, and;
- c. colored coded red or labeled as noted above.

Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous (introduced through the skin such as a cut) injury.

OTHER REGULATED WASTE - CONTAINMENT:

The provisions that apply to contaminated sharps, above, apply to other regulated waste.

DISPOSAL OF CONTAMINATED SHARPS & OTHER REGULATED WASTE:

The actual disposal of all regulated waste shall be in compliance with applicable state laws.

SPECIMENS OF POTENTIALLY INFECTIOUS MATERIALS:

Specimens of blood and potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

SPLASHING, SPRAYING OF POTENTIALLY INFECTIOUS MATERIALS:

All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and the generation of droplets of these substances.

MOUTH PIPETTING:

Mouth pipetting and mouth suction of blood or other potentially infectious materials is prohibited.

DESIGNATED EXPOSURE CONTROL PLAN ADMINISTRATOR

Our designated the Exposure Control Plan Administrator will be knowledgeable in all aspects of this Plan as it relates to our operations and be available to answer questions raised by our first aid providers. The Exposure Control Plan Administrator may call upon professionals in the Medical Arts to field questions that are of technical nature outside of the Administrator's area of expertise.

The Exposure Control Plan Administrator will:

- a. ensure this Plan is kept current.
- b. ensure training is provided as required.
- c. maintain all records associated with this plan.

DESIGNATED FIRST AID PROVIDERS

Before one may be designated as a first aid provider, he/she must have a valid certificate in first aid training from the U.S. Bureau of Mines, the Red Cross, or equivalent training that can be verified by documentary evidence. No person is to administer any medical assistance for which they are not appropriately trained. It is noted that the rendering of first aid is not the primary job of the our designated first aid providers.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

In spite of work practice and engineering controls, there is a requirement for appropriate personal protective equipment to provide an impermeable barrier between potentially infectious materials and the employees work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Employees will use appropriate personal protective equipment when there is a possibility of occupational exposure to bloodborne pathogens or other potential infectious materials.

Personal protective equipment will be provided in appropriate sizes and at no cost to the employees. Further, maintenance and replacement of personal protective equipment will be provided at no cost to the employee.

Personal protective equipment will be discarded immediately if its ability to function as a barrier is compromised.

Most importantly, employees must understand that personal protective equipment is useless unless it provides an impermeable barrier between bloodborne pathogens and other potentially infectious materials and the employee's clothes, skin, eyes, mouth, or other mucous membranes.

Personal Protective Equipment is considered appropriate if it prevents potentially infectious materials from reaching work/street clothing or body surface when used under normal conditions.

DISPOSABLE GLOVES:

Disposable, single use gloves, such as surgical or examination gloves will be worn when it can be reasonably anticipated that the employee may have hand contact with blood or other potentially infectious materials and when handling or touching contaminated items or surfaces. Disposable gloves will always be used when there is a possibility of contact with bloodborne pathogens or other potentially infectious materials.

Disposable gloves shall never be washed, decontaminated, or reused.

Disposable gloves shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or their ability to function as a barrier is compromised.

Should any employee be allergic to the normal gloves provided, an appropriate alternative (such as hypoallergenic and/or powderless gloves) will be provided in the proper size at no cost to the employee.

UTILITY GLOVES:

Utility gloves may be used for general cleanup (not for any trauma victim procedure) when there is anticipated exposure to bloodborne pathogens or other potentially infectious materials. Utility gloves may be decontaminated for re-use if the integrity of the gloves is not compromised. They will be discarded if they are cracked, peeling, torn, punctured, or exhibit signs of deterioration or when their ability to function as a barrier is compromised.

EYE AND RESPIRATORY PROTECTION:

Eye (goggles, glasses, face shield, etc.) and respiratory (mask, etc.) protection will be used when it can reasonably be expected that bloodborne pathogens or other potentially infectious materials may splash or spray in or around the eyes, nose, mouth, and general head area of the employee.

PROTECTIVE BODY CLOTHING:

Protective body clothing such as gowns, aprons, lab coats, etc. will be worn as determined by the professional judgment of the employee in relation to task. The protective body clothing will certainly be worn where there can reasonably be expected exposure to bloodborne pathogens or other potentially infectious materials to the body area.

LAUNDRY:

Personal protective equipment will be cleaned, laundered, and disposed of at no cost to the employee.

[Note: In rare and extraordinary circumstances, an employee, in her/his professional judgment, may decline to temporarily and briefly wear personal protective equipment if he/she deems that the equipment would prevent the delivery of health care or would have increased the hazard of occupational exposure to the employee or his/her co-workers. Should this event occur, it will be documented, investigated, and procedures will be developed to prevent a reoccurrence.]

HOUSEKEEPING

Housekeeping is an ongoing, never ending procedure which not only enhances our work environment but also eliminates health risk to our personnel. In the area of bloodborne pathogens and other hazardous materials, to ensure proper cleaning, decontamination, sterilization, and disinfecting of surfaces within our facility, cleaning will be accomplished only by employees who have received training in universal precautions and the provisions of this plan. The written Housekeeping Schedule & Checklist is found in Section II and this Schedule will be adhered to following an incident that results in the potential exposure to bloodborne pathogens or other potentially infectious materials.

Broken, potentially infected glassware, should be picked up and disposed of using mechanical means such as a brush and dust pan or forceps.

All sharps will be stored in a manner that allows easy access and safe handling.

Infectious waste will be placed in containers that are color coded red. These containers will be decontaminated as soon as practical.

Subsequent to rendering any procedures, employees will ensure that all surfaces on which blood, body fluids, bloodborne pathogens, or other infectious materials may be present are cleaned with an appropriate disinfectant.

HEPATITIS B EPIDEMIOLOGY

Hepatitis B (serum hepatitis) routes of infection include parenteral, oral, or direct contact. The virus can also spread by contact with the respiratory tract. Its sources include contaminated needles and surgical instruments as well as contaminated blood products. The virus of hepatitis B has been found in urine. Further, the virus of hepatitis B can live for up to seven (7) days on a dry surface and can be easily be transmitted by a single needle stick. Its incubation period is quite lengthy generally between 45 and 180 days. It affects all age groups. Recovery from hepatitis B does provide immunity. Generally, one can expect a complete recovery from viral hepatitis, however, it is potentially fatal depending on many factors including the virulence (aggressiveness) of the virus, prior hepatic damage, and natural barriers to damage and disease of the liver. It is possible for viral hepatitis to lead to fulminating viral hepatitis and subacute fatal viral hepatitis both of which are fatal. Onset symptoms may include headache, elevated temperature, chills, nausea, dyspepsia, anorexia, general malaise, and tenderness over the liver. These types of symptoms will last

about one (1) week, then subside, and jaundice will occur. Jaundice is caused by damaged liver cells. The convalescent stage begins with the disappearance of the jaundice and may last several months. Recovery is expected in six (6) months.

RISK OF EXPOSURE

Per the Department of Human Services of the Center for Disease Control, below is the risk of infection after occupational exposure:

HBV:

First aid providers who have received hepatitis B vaccine and have developed immunity to the virus are at virtually no risk for infection. For an unvaccinated person, the risk from a single needlestick or cut exposure to HBV-infected blood ranges from 6-30% and depends on the hepatitis B e antigen (HBeAg) status of the source individual. In individuals who are both hepatitis B surface antigen (HBsAG) positive and HBeAg positive have more virus in their blood and are more likely to transmit HBV.

HCV:

Based on limited studies, the risk for infection after a needlestick or cut exposure to HCV-infected blood is approximately 1.8%. The risk following a blood splash is unknown, but is believed to be very small; however, HCV infection from such an exposure has been reported.

HIV:

The average risk of HIV infection after a needle stick or cut exposure to HIV-infected blood is 0.3% (i.e., three-tenths of one percent, or about 1 in 300). Stated another way, 99.7% of needlestick/cut exposures do not lead to infection.

The risk after exposure of the eye, nose, or mouth to HIV-infected blood is estimated to be, on average, 0.1% (1 in 1,000).

The risk after exposure of the skin to HIV-infected blood is estimated to be less than 0.1%. A small amount of blood on intact skin probably poses no risk at all. There have been no documented cases of HIV transmission due to an exposure involving a small amount of blood on intact skin (a few drops of blood on skin for a short period of time). The risk may be higher if the skin is damaged (for example, by a recent cut) or the contact involves a large area of skin or is prolonged (for example, being covered in blood for hours).

All employees with occupation exposure are encouraged to accept the hepatitis B vaccination.

HEPATITIS B VACCINATION

The hepatitis B vaccination series will be provided, at no cost, to all unvaccinated first aid providers as soon as possible (within 24 hours of initial exposure). All exposed first aid providers employees are encouraged to take this vaccination series unless they have previously received the complete hepatitis B vaccination series; antibody testing has revealed that the employee is immune; or the vaccine is contraindicated (not recommended) for medical reasons. Post-exposure evaluation, prophylaxis (prevention of or protection from disease), and follow-up will be provided at no cost to the employee.

The Hepatitis B vaccination will be performed under the supervision of a licensed physician or other licensed healthcare professional.

All laboratory tests will be conducted by an accredited laboratory at no cost to the employee.

Should routine booster dose(s) of hepatitis B vaccine (as recommended by the U.S. Public Health Service at a future date) be required, they will be provided at no cost as long as the employee remains a first aid provider.

An employee may decline the Hepatitis B vaccination and this declination shall not reflect unfavorably upon him/her, however this declination must be in writing. See Section II.

It is important to note that if a first aid provider initially declines the hepatitis B vaccination series, he/she may at a later date decide to accept the vaccination series and it will be provided at no cost assuming he/she is still occupationally exposed to bloodborne pathogens or other potentially infectious materials.

SHARPS INJURY LOG

A Sharps injury log will be maintained for the recording of percutaneous injuries from contaminated sharps.

The information on the log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

The sharps injury log will contain:

- a. the type and brand of device involved in the incident.
- b. the department or work area where the exposure incident occurred.
- c. an explanation of how the incident occurred.

The sharps injury log shall be maintained for the period of five years.

FIRST AID PROVIDER INPUT

As a matter of policy, all first aid providers who are responsible for first aid delivery as an additional job are encouraged to suggest methods to improve our engineering and workplace controls. This input may be made verbally to the Plan Administrator at any time. Additionally, during the annual refresher training, suggestions will be solicited.

PLAN REVIEW

This plan will be reviewed, and if necessary, updated annually to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. As new medical devices are developed which reduce employee exposure, they will be introduced into our practice. A review of the "Sharps Log" will help identify problem areas and/or ineffective devices which may need replacement.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

The information that has preceded this Section has dealt with the methods to restrict occupational exposure to bloodborne pathogens and other infectious materials. Post-exposure evaluation and follow-up deals with the steps to take immediately following a potential exposure incident and the steps that will be taken over time to protect our employees from further health risk.

All incidents involving exposure to blood or other potentially infectious materials will be reported to the Exposure Control Plan Administrator, in writing, before the end of the shift in which the incident occurred using the Exposure Incident Report (Section II). This Report will be prepared regardless of whether or not there has been an "Exposure Incident" as defined in this Plan and in 29 CFR 1910.1030. A separate Exposure Incident Report will be completed for each employee who was occupationally exposed.

Information in this Report will include:

- a. the date and time the incident occurred.
- b. a brief description of the events leading up to the exposure (what happened.)
- c. the name of the individual exposed.
- d. the route of exposure.
- e. "source individual" and "exposed individual" information including the acceptance or rejection of hepatitis B vaccination series.

- d. a determination of whether or not an actual "exposure incident" occurred. Refer to Definitions in this Plan or 29 CFR 1910.1030.

The Exposure Control Plan Administrator or his authorized representative will review the Exposure Incident Report and determine if methods or procedures may be altered to prevent a reoccurrence of the incident.

Further, an occupational bloodborne pathogens exposure incident which results in the recommendation for hepatitis B vaccination would be recorded on OSHA Form 300 as an injury. See Recordkeeping.

All unvaccinated employees who have assisted in any situation involving blood will be afforded the opportunity to receive the hepatitis B vaccination series as soon as possible but not later than twenty-four (24) hours after the situation.

A confidential medical evaluation and follow-up will be provided immediately, at not cost, to the employee. The healthcare professional evaluating an employee after an exposure incident will be provided a copy of 29 CFR 1910.1030 (Section II).

Further, the healthcare professional will be provided a description of the exposed employee's duties as they relate to the exposure incident; documentation of the route(s) of exposure; the circumstances under which the exposure occurred; the results of the source individual's blood testing, if available; and all medical records relevant to the appropriate treatment of the employee including vaccination status which is maintained by our office. See Recordkeeping.

The confidential medical evaluation and follow-up will include:

- a. documentation of the route(s) of exposure.
- b. the circumstances under which the exposure incident occurred.
- c. the identification and documentation of the source individual, unless it can be established that the identification is not feasible or prohibited by state or local law.
- d. the exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

Note: If the employee consents to baseline blood collection, but does not consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.]

- e. the source individual's blood shall be tested as soon as feasible to determine HBV and HIV infectivity unless it is already known in which case this procedure is not necessary.

If consent to test the source individual's blood cannot be obtained the following will occur:

- a. it will be established and documented that legally required consent cannot be obtained.
- b. when the source individual's consent is not required by law, the source individual's blood shall be tested and the results documented.

The results of the source individual's testing shall be made available to the exposed employee and the employee shall be informed of applicable laws and the identity and infectious status of the source individual.

The employee shall be provided post-exposure prophylaxis, when medically indicated, and counseling.

The employee will be provided with a copy of the healthcare professional's written opinion within 15 days of the completion of the evaluation. The written opinion shall be limited to:

- a. whether Hepatitis B vaccination is indicated and if the employee has received such vaccination.
- b. an indication that the employee has been informed of the results of the evaluation.
- c. an indication that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

All other findings or diagnoses will remain confidential and will not be included in the written report.

RECORDKEEPING

Complete and accurate medical records will be maintained for each employee with occupational exposure. These records shall remain confidential and will not be disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by law.

Medical records will be maintained for at least the duration of employment plus 30 years.

Included in the employee's medical record will be:

- a. the employee's name and social security number.
- b. a copy of the employee's hepatitis B vaccination status including the date of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination.
 1. if the employee has declined to receive the hepatitis B vaccination series when appropriate, this declination will be included in the person's medical records.
- c. a copy of all results of examinations, medical testing, and follow-up procedures as required following an exposure incident.
- d. the employer's copy of the healthcare professional's written opinion following an exposure incident.
- e. a copy of all information provided to the healthcare professional following an exposure incident.

All work-related injuries from needlesticks and cuts, lacerations, punctures and scratches from sharp objects contaminated with another person's blood or other potentially infectious materials are to be recorded on the OSHA 300 as an injury.

- a. To protect the employee's privacy, the employee's name may not be entered on the OSHA 300.
- b. If the employee develops a bloodborne disease, the entry must be updated and recorded as an illness.

TRAINING

All of our first aid providers must have current certificates of first aid and CPR training on file. These records will be maintained by the Plan Administrator.

Initial training, training at the introduction of a new or altered task affecting exposure to bloodborne pathogens or other potentially hazardous materials, and annual training will be provided by a person knowledgeable in the subject matter contained in this Plan.

Training will be interactive between the instructor and employee. An opportunity to ask questions will be provided. Further, this Plan as well as 29 CFR 1910.1030, *Bloodborne Pathogens*, will be readily available for review.

All training will be documented using the forms found in Appendix A. Training documentation will be maintained for a period of three (3) years from the date on which the training occurred.

Training will include, but not be limited to, the following topics and materials:

- a. a complete review of our Exposure Control Plan and its accessibility.
- b. an accessible copy of 29 CFR 1910.1030 and an explanation of its contents.
- c. a general explanation of the epidemiology and symptoms of bloodborne diseases.
- d. an explanation of the modes of transmission of bloodborne pathogens.
- e. an explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- f. an explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment.
- g. information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
- h. an explanation of the basis for selections of personal protective equipment.
- i. information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- j. information on the appropriate actions to take and persons to contact in an emergency involving blood other potentially infectious materials.
- k. an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- l. information on the post-exposure evaluation and follow-up that is provided after an exposure incident.
- m. an explanation of the color coding required by paragraph (g)(1), 29 CFR 1910.1030.
- n. a request for input from employees in the identification, evaluation, and selection of effective engineering and work practice controls.

WASTE MANAGEMENT

Waste management, if necessary, will comply with State EPA standards regarding handling, storage, and shipping of medical wastes.

SUMMARY

The whole thrust of the Program is to provide an awareness of the dangers of bloodborne pathogens, provide a means of reducing the possibility of occupational exposure, and, should occupational exposure occur, provide a means of reducing health risk.

ServiceBoss International, Inc.

EXPOSURE DETERMINATION

LIST I

All job classifications in which all employees have occupational exposure.

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

1. First Aid Providers_____
2. _____
3. _____
4. _____
5. _____
6. _____

Note: The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents and only at the location where the incident occurred.

ServiceBoss International, Inc.

EXPOSURE DETERMINATION

LIST II

Job classifications in which some employees have occupational exposure.

1. None _____
2. _____
3. _____
4. _____
5. _____
6. _____

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

Note: The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents and only at the location where the incident occurred.

ServiceBoss International, Inc.

EXPOSURE DETERMINATION

LIST III

All tasks and procedures or groups of closely related tasks and procedures in which occupation exposure occurs and are performed by employees in job classifications noted in List II.

	<u>Job Classification</u>	<u>Tasks</u>
1.	<u>None</u>	<hr/> <hr/> <hr/> <hr/>
2.	<hr/>	<hr/> <hr/> <hr/> <hr/>
3.	<hr/>	<hr/> <hr/> <hr/> <hr/>
4.	<hr/>	<hr/> <hr/> <hr/> <hr/>

Note: The primary job assignment of our designated first aid providers is not the rendering of first aid or other medical assistance. Any first aid rendered by them is rendered only as a collateral duty, responding solely to injuries resulting from workplace incidents and only at the location where the incident occurred.

Note: The above exposure determinations are to be made without regard to the use of personal protective equipment.

ServiceBoss International, Inc.
Environmental, Health & Safety Program

HOUSEKEEPING SCHEDULE & CHECKLIST

SCHEDULE

Following every incident where there is a possibility of the presence of residual bloodborne pathogens or other potentially infectious materials.

CHECKLIST

Only personnel who have had training in our Exposure Control will ensure that all surfaces are decontaminated and that cleaning materials are properly disposed of. Areas to consider include, but are not limited to:

	YES	NA
FLOORS	<input type="checkbox"/>	<input type="checkbox"/>
WALLS	<input type="checkbox"/>	<input type="checkbox"/>
EQUIPMENT	<input type="checkbox"/>	<input type="checkbox"/>
PRODUCT	<input type="checkbox"/>	<input type="checkbox"/>
WASTE CONTAINERS	<input type="checkbox"/>	<input type="checkbox"/>
TOOLS	<input type="checkbox"/>	<input type="checkbox"/>

Broken, potentially infected glassware, should be picked up and disposed of using mechanical means such as a brush and dust pan or forceps.

All sharps will be stored in a manner that allows easy access and safe handling.

Infectious waste will be placed in containers that are color coded red. These containers will be decontaminated as soon as practical.

Subsequent to rendering any procedures, employees will ensure that all surfaces on which blood, body fluids, bloodborne pathogens, or other infectious materials may be present are cleaned with an appropriate disinfectant.

ServiceBoss International, Inc.

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis V vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

(WITNESS)

(EMPLOYEES SIGNATURE)

(PRINTED NAME)

(DATE)

ServiceBoss International, Inc.
Environmental, Health & Safety Program

SHARPS INJURY LOG

Note: A sharps injury log will be maintained for the recording of percutaneous injuries from contaminated sharps.

The information on the log will be recorded and maintained in such manner as to protect the confidentiality of the injured employee.

This sharps injury log shall be maintained for the period of five years.

(Incident Date) (Employee SSN)

Type and brand of device involved in the incident:

Work area where the exposure incident occurred:

Explanation of how the incident occurred:

Safety Program Administrator

ServiceBoss International, Inc.

ANNUAL EXPOSURE CONTROL PLAN REVIEW

This Exposure Control Plan was prepared:

At least annually, this program will be reviewed and, if necessary, updated, to reflect innovations in procedure and technological developments that eliminate or reduce exposure to bloodborne pathogens.

As part of the annual review, the below will be considered:

- a. Employee Input
- b. Sharps Injury Log
- c. Exposure Incident Reports
- d. Professional Journals

<u>Date Reviewed:</u>	<u>Signature</u>	<u>Title</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ServiceBoss International, Inc.
Environmental, Health & Safety Program

EXPOSURE INCIDENT REPORT

ALL INFORMATION ON THIS FORM IS TO REMAIN CONFIDENTIAL

THIS FORM SHALL BE COMPLETED AS SOON AS FEASIBLE AFTER AN EXPOSURE INCIDENT BUT, UNDER NO CIRCUMSTANCES, AFTER THE SHIFT ON WHICH THE INCIDENT OCCURRED.

DATE: _____ TIME: _____

NAME OF EMPLOYEE: _____

ROUTE OF EXPOSURE: _____

SOURCE INDIVIDUAL'S NAME: _____

a. Above individual did / did not consent to be tested for HBV or HIV.

b. Testing was done by: _____

1. Results: _____

EMPLOYEE WAS OFFERED AND ACCEPTED:	NO	YES	
a. Hepatitis Vaccination Series. [Date(s)]	<input type="checkbox"/>	<input type="checkbox"/>	_____
1. If "NO", written declination was signed.	<input type="checkbox"/>	<input type="checkbox"/>	
b. Post Exposure Evaluation and follow-up.	<input type="checkbox"/>	<input type="checkbox"/>	
c. Employee consents to baseline blood collection.	<input type="checkbox"/>	<input type="checkbox"/>	_____

(Signature)

Description of events leading to this exposure incident:

Corrective Measures to Prevent a Reoccurrence:

(Exposure Control Plan Administrator Signature)

(Employee Signature)

ServiceBoss International, Inc.

FALL PROTECTION

ServiceBoss International, Inc.

Safety Program

SECTION III

FALL PROTECTION

INDEX

TOPIC	PAGE
OVERVIEW	1
DUTIES OF THE PROGRAM ADMINISTRATOR	1
PRE-PROJECT PLANNING	2
DEFINITIONS	3
WHERE FALL PROTECTION IS REQUIRED	7
PRE-CONSTRUCTION SURVEY	11
FALL PROTECTION SYSTEMS	11
FALL PROTECTION PLAN	17
ACCIDENTS AND NEAR ACCIDENTS	19
TRAINING /RETRAINING	19
FALL PROTECTION AT THE JOB SITE	20

OSHA Standards:

29 CFR 1926.500 *Scope, Application, and Definitions Applicable to This Subpart*

29 CFR 1926.501 *Duty to Have Fall Protection*

29 CFR 1926.502 *Fall Protection Systems Criteria and Practices*

29 CFR 1926.503 *Training Requirements*

29 CFR 1926 Subpart M, *App A Determining Roof Widths*

29 CFR 1926 Subpart M, *App B Guardrail Systems*

29 CFR 1926 Subpart M, *App C Personal Fall Arrest Systems*

29 CFR 1926 Subpart M, *App D Positioning Device Systems*

Forms:

[Found immediately following this program]

Fall Protection Plan (w/Changes)

Safety Net Installation Certification

OVERVIEW

One of the most serious hazards faced by our employees is falls from heights. Our Fall Protection Program has been developed to prevent injury from falls of six (6) feet or more from a walking/working surface to a lower level, to prevent objects falling from above and striking persons below, and to prevent job site persons from falling into holes.

Within the context of this program, the term “fall hazard” does not refer to tripping and falling which is addressed in our general safety & health program, nor does it apply to falling off a ladder or scaffold. Scaffold and ladder safety is addressed within its own program.

A copy of our Fall Protection **Program** can be found readily accessible to our employees on appropriate job sites.

A copy of our Fall Protection **Plan** will be found on every applicable job site.

On all job sites where fall hazards exist, there will be at least one competent person who has the training and ability to identify fall hazards and the authority to ensure that proper fall protection systems are properly implemented.

The following areas of concern are addressed by this Program:

- a. the need to know where fall protection is required.
- b. selection of fall protection systems which are appropriate for given situations.
- c. construction and installation of safety systems.
- d. supervision of employees.
- e. implementation of safe work procedures.
- f. training in selection, use, and maintenance of fall protection systems.

Our Fall Protection Program may be reviewed at any time by our employees. Should a question arise concerning this Program, personnel are encouraged to consult with their supervisor or our Fall Protection Program Administrator.

DUTIES OF THE PROGRAM ADMINISTRATOR

The Fall Protection Program Administrator's duties include:

- a. training of personnel.
- b. maintenance of training records.
- c. random, unannounced job site inspections to assure compliance with both OSHA standards and company safety policies.

- d. resolution of specific problems that may present themselves regarding a particular job site situation.
- e. designating a competent (by training or experience) person at each applicable job site who will ensure:
 1. a copy of our fall protection program/plan is readily accessible on appropriate job sites.
 2. subcontractors with whom we work are appropriately trained in fall protection.
 3. a written certification record has been prepared documenting that employees who have potential exposure to fall hazards at the job site have received the required training in protection.
 4. the fall protection system(s) utilized at the job site are appropriate for the hazard(s) present.
 5. that, before any work is initiated, the walking/working surfaces at the job site are capable of supporting both our personnel and equipment.

The Fall Protection Program Administrator will be familiar with all applicable standards and will keep abreast of developments in the field of fall protection.

PRE-PROJECT PLANNING

Fall protection requires a joint effort by our personnel and the specialty subcontractors who may be working with us to identify work situations in which fall hazards exist, determine the most appropriate fall protection system to be utilized, and to ensure that all persons understand the proper methods of utilizing the selected fall protection systems. A pre-construction survey by a competent person will often provide the information needed to make these determinations.

Fall protection system requirements may change during a project and the competent person on site will ensure that fall protection is maintained at all times. Care will be taken to assure that load limits are not exceeded on walking/working surfaces and attachment points and hardware is capable of withstanding (with the appropriate safety factor) the potential forces that may be generated during an actual fall incident.

Fall protection hardware and equipment owned, rented, or leased will be NIOSH/ANSI approved and it is assumed that the manufacturer's technical specifications and capabilities are accurate.

From the very inception of a potential project (pre-bid) to completion, fall protection needs and costs will be factored in.

DEFINITIONS

There are a number of terms and phrases, not common in everyday life, which must be understood to grasp the thrust of this Program. For those employees directly involved with this Program or affected by it, there are specific requirements and procedures which would be meaningless without an understanding of the "language" of our Fall Protection Program. Words used within the definitions which are themselves defined are printed in bold italic.

ANCHORAGE: a secure point of attachment for *lifelines, lanyards* or *deceleration devices*.

BODY HARNESS: straps which may be secured about the employee in a manner that will distribute the fall arrest over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a *personal fall arrest system*.

BUCKLE: any device for holding the *body harness* closed around the employee's body.

CARABINER: an oval metal ring with a snap link used to fasten a rope to the piton [a spike (attachment) with an eye to which a rope can be secured.]

CFR: Code of Federal Regulations.

COMPETENT PERSON: one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees; and who has authorization to take prompt corrective measures to eliminate them.

CONNECTOR: a device which is used to couple (connect) parts of the *personal fall arrest system* and *positioning device systems* together. It may be an independent component of the system, such as a *carabiner*, or it may be an integral component of part of the system (such as a *buckle* or dee-ring sewn into a self-retracting *lanyard*).

CONTROLLED ACCESS ZONE (CAZ): an area in which certain work (e.g., *overhand bricklaying*) may take place without the use of *guardrail systems, personal fall arrest systems*, or safety net systems; access to the zone is controlled.

DANGEROUS EQUIPMENT: equipment (such as pickling or galvanizing tanks, degreasing units, machinery, electrical equipment, and other units) which, as a result of form or function, may be hazardous to employees who fall onto or into such equipment.

DECELERATION DEVICE: any mechanism, such as a *rope grab*, rip-stitch *lanyard*, specially-woven *lanyard*, tearing or deforming *lanyards*, automatic self-retracting *lifelines/lanyards*, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

DECELERATION DISTANCE: the additional vertical distance a falling employee travels from the point at which the *deceleration device* begins to operate before stopping, excluding *lifeline* elongation and *free fall distance*. It is measured as the distance between the location of an employee's *body harness* attachment point at the moment of activation (at the onset of fall arrest forces) of the *deceleration device* during a fall, and the location of that attachment point after the employee comes to a full stop.

EQUIVALENT: alternative designs, materials, or methods to protect against a hazard which the employer can demonstrate will provide an equal or greater degree of safety for employees than the methods, materials or designs specified in the standard.

FAILURE: load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

FREE FALL: the act of falling before a *personal fall arrest system* begins to apply force to arrest the fall.

FREE FALL DISTANCE: the vertical displacement of the fall arrest attachment point on the employee's *body harness* between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes *deceleration distance*, and *lifeline/lanyard* elongation, but includes any *deceleration device* slide distance of *self-retracting lifeline/lanyard* extension before they operate and fall arrest forces occur.

GUARDRAIL SYSTEM: a barrier erected to prevent employees from falling to *lower levels*.

HOLE: a gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, *roof*, or other *walking/working surface*.

INFEASIBLE: it is impossible to perform the construction work using a conventional fall protection system (i.e., *guardrail system*, safety net system, or *personal fall arrest system*) or that it is technologically impossible to use any one of these systems to provide fall protection.

LANYARD: a flexible line of rope, wire rope, or strap which generally has a *connector* at each end for connecting the *body harness* to a *deceleration device*, *lifeline*, or *anchorage*.

LEADING EDGE: the edge of a floor, **roof**, or formwork for a floor or other **walking/working surface** (such as the deck) which changes location as additional floor, **roof**, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

LIFELINE: a component consisting of a flexible line for connection to an **anchorage** at one end to hang vertically (vertical lifeline), or for connection to **anchorages** at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of **personal fall arrest system** to the **anchorage**.

LOW-SLOPE ROOF: a **roof** having a slope less than or equal to 4 in 12 (vertical to horizontal).

LOWER-LEVELS: those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

MECHANICAL EQUIPMENT: all motor or human propelled wheeled equipment used for **roofing work**, except wheelbarrows and mopcars.

OPENING: a gap or void 30 inches or more high and 18 inches or more wide, in a wall or partition through which employees can fall to a **lower level**.

OVERHAND BRICKLAYING AND RELATED WORK: the process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. Related work includes mason tending and electrical installation incorporated into the brick wall during the overhand bricklaying process.

PERSONAL FALL ARREST SYSTEM: a system used to arrest an employee in a fall from a working level. It consists of an **anchorage**, **connectors**, a **body harness** and may include a **lanyard**, **deceleration device**, **lifeline**, or suitable combination of these. **The use of body belts for fall arrest is prohibited.**

POSITIONING DEVICE SYSTEM: a **body belt** or **body harness** system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

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

ROPE GRAB: a **deceleration device** which travels on a **lifeline** and automatically, by friction, engages the **lifeline** and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

ROOF: the exterior surface on the top of a building. This does not include floors or formworks which, because a building has not been completed, temporarily become the top surface of a building.

ROOFING WORK: the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the **roof** deck.

SAFETY-MONITORING SYSTEM: a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

SELF-RETRACTING LIFELINE/LANYARD: a **deceleration device** containing a drum-wound line which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

SNAPHOOK: a **connector** comprised of a hook-shaped member with a normally closed keeper of similar arrangement which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types:

- (1) the locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or
- (2) the non-locking type with a self-closing keeper which remains closed until pressed open for connection or disconnection. The use of a non-locking snaphook as part of **personal fall arrest systems** and **positioning device systems** is prohibited.

STEEP ROOF: a **roof** having a slope greater than 4 in 12 (vertical to horizontal).

TOEBOARDS: a low protective barrier that will prevent the fall of material and equipment to **lower levels** and provide protection from falls for personnel.

UNPROTECTED SIDES AND EDGES: any side or edge (except at entrances to points of access) of a **walking/working surface**, e.g., floor, **roof**, ramp, or runway where there is no wall or **guardrail system** at least 39 inches high.

WALKING/WORKING SURFACE: any surface, whether horizontal or vertical, on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runway, formwork and concrete reinforcing steel; not including ladders, vehicles, or trailers on which employees must be located in order to perform their job duties.

WARNING LINE SYSTEM: a barrier erected on a **roof** to warn employees that they are approaching an unprotected **roof** side or edge, and which designates an area in which **roofing work** may take place **without** the use of guardrail, **body belt**, or safety net systems to protect employees in the area.

WORK AREA: that portion of a **walking/working surface** where job duties are being performed.

WHERE FALL PROTECTION IS REQUIRED

The "key" distance is six (6) feet. All employees must be aware that if there is a possibility of falling six (6) feet or more at least one (1) fall protection system will be implemented. Further, protection from being struck by falling objects from above will be provided on all job sites.

All areas identified by OSHA are included because, over time, most of these areas will present themselves on job sites even if the exposures are the result of another contractor's work.

Below listed are specific situations where fall protection systems will be utilized.

UNPROTECTED SIDES AND EDGES:

Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

LEADING EDGES:

Each employee who is constructing a leading edge 6 feet or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems.

HOIST AREAS:

Each employee in a hoist area shall be protected from falling 6 feet or more to lower levels by guardrail systems or personal fall arrest systems.

If a guardrail system is utilized in a hoist area and portions of the system are removed to facilitate the hoisting operation, and an employee must lean through the access opening or out over the edge of the access opening, that employee must be protected by a fall arrest system.

HOLES:

Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet above lower levels by personal fall arrest systems, covers, or guardrail systems.

- a. Each employee on a walking/working surface shall be protected from tripping in or stepping into or through holes (including skylights) **(regardless of height)** by covers.
- b. Each employee on a walking/working surface shall be protected from objects falling through holes **(regardless of height)** by covers.

FORMWORK and REINFORCING STEEL:

Each employee on the face of formwork or reinforcing steel shall be protected from falling 6 feet or more to lower levels by personal fall arrest systems, safety net systems, or positioning device systems.

RAMPS, RUNWAYS, and OTHER WALKWAYS:

Each employee on ramps, runways, and other walkways shall be protected from falling 6 feet or more to lower levels by guardrail systems.

EXCAVATIONS:

Each employee at the edge of an excavation 6 feet or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barriers.

Further, each employee at the edge of a well, pit, shaft, and similar excavation 6 feet or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.

DANGEROUS EQUIPMENT:

Each employee **less than 6 feet** above dangerous equipment shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards.

Each employee **6 feet or more** above dangerous equipment shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.

OVERHAND BRICKLAYING AND RELATED WORK:

Each employee performing overhand bricklaying and related work 6 feet or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or shall work in a controlled access zone.

Each employee performing overhand bricklaying and related work who is required to reach more than 10 inches below the level of the walking/working surface on which he/she is working shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system.

ROOFING WORK ON LOW-SLOPED ROOFS:

Each employee engaged in roofing activities on low-sloped roofs with unprotected sides and edges 6 feet or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and a safety net system or a warning line system and a safety monitoring system.

NOTE: On roofs 50 feet or less in width, the use of a safety monitoring system alone (without the warning line system) is permitted.

STEEP ROOFS:

Each employee on a steep roof with unprotected sides and edges 6 feet or more above lower levels shall be protected from falling by guardrail systems with toeboards, safety net systems, or personal fall arrest systems.

PRECAST CONCRETE ERECTION:

Each employee, engaged in the erection of precast concrete members (including, but not limited to the erection of wall panels, columns, beams, and floor and roof "tee") and related operations such as grouting of precast concrete members, who is 6 feet or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems.

RESIDENTIAL CONSTRUCTION:

Each employee engaged in residential construction activities 6 feet or more above lower levels shall be protected by guardrail systems, safety net systems, or personal fall arrest systems.

WALL OPENINGS:

Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

WALKING/WORKING SURFACES NOT OTHERWISE ADDRESSED:

Each employee on a walking/working surface 6 feet or more above a lower level that is not addressed in the preceding fourteen (14) categories shall be protected from falling by a guardrail system, a safety net system, or a personal fall arrest system except when:

- a. working on scaffolds fall protection requirements are covered by subpart L of 29 CFR 1926.
- b. working on certain cranes and derricks fall protection requirements are covered by subpart N of 29 CFR 1926.
- c. performing steel erection work in buildings fall protection requirements are covered by subpart R of 29 CFR 1926.
- d. working on certain types of equipment used in tunneling operations fall protection requirements are covered by subpart S of 29 CFR 1926.
- e. engaged in the construction of electric transmission and distribution lines, equipment fall protection requirements are covered by subpart V of 29 CFR 1926.
- f. working on stairways and ladders fall protection requirements are covered by subpart X of 29 CFR 1926.

NOTE: On multi-employer work sites, employees of all contractors and subcontractors must understand the fall protection hazards that exist and be aware of the various methods of fall protection even if they are NOT directly exposed to fall hazards in their particular work area. For example, a contractor may have a controlled access zone in place and all persons on the job site, regardless of their employer, must understand the importance of remaining outside that CAZ.

PRE-CONSTRUCTION SURVEY

Prior to the initiation of any construction project, the job site will be surveyed by a competent/qualified person to determine:

- a. if fall protection systems will be required.
- b. if fall hazards exist, the types of conventional fall protection systems to be utilized.
 1. particular attention will be given to anchorage points, location of warning lines, etc..
- c. rescue procedures to be used if a fall actually occurs.
- d. the load-carrying capabilities of the walking/working surface.
- e. assuring that all personnel utilizing a fall protection system have training in that system.

This survey may be made without the use of fall protection because no work will be accomplished during this survey and installing fall protection systems would create a greater hazard.

If it is determined that certain areas within the overall worksite have fall hazards that cannot be addressed with conventional fall protection systems (those areas being limited to leading edge work, residential construction work, and precast concrete work), **then** a Fall Protection Plan must be prepared to specifically protect employees from these hazards.

FALL PROTECTION SYSTEMS

GUARDRAIL SYSTEM:

A guardrail system is a physical barrier erected to prevent employees from falling to lower levels.

Specific guardrail systems criteria are found in 29 CFR 1926.502(b) and we will erect guardrail systems that comply with the cited criteria.

The main advantage of a guardrail system is that it is a “passive” system which, once installed, requires no employee involvement in its function. A guardrail will stop an employee who inadvertently walks into it.

A guardrail system is an acceptable fall protection system in each of the fifteen (15) OSHA designated work areas save one (1) - “Formwork and Reinforcing Steel.”

GUARDRAIL SYSTEMS AT HOISTING AREAS:

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

NOTE: If a portion of the guardrail system is removed at a hoisting area to facilitate the hoisting operations **and** an employee must lean out over the opening, then that employee must be protected by a personal fall arrest system. In this instance it is important to remember that the personal fall arrest system may not be attached to the guardrail system.

GUARDRAIL SYSTEMS AT HOLES:

Guardrail systems used at holes shall be erected on all unprotected sides of the edges of the hole.

When the hole is to be used for the passage of materials, the hole shall not have more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it shall be closed over with a cover **or** protected with a guardrail system on all unprotected sides or edges.

NOTE: Guardrails need not be erected around holes while employees are working at the hole, passing materials through the hole, etc.. When work is completed around the hole, the hole must be protected by guardrails on all sides of the hole or by covers.

Guardrail systems used around holes which are used as points of access (such as ladderways) will be provided with a gate or be offset so that a person cannot walk directly into the hole.

GUARDRAIL SYSTEMS ON RAMPS AND RUNWAYS:

Guardrail systems used on ramps and runways shall be erected along each unprotected side or edge. Ramps, runways, and other walkways on which employees need protection from falling 6 feet or more to a lower level must be protected by a guardrail system and only a guardrail system.

PERSONAL FALL ARREST SYSTEM:

A personal fall arrest system is, as the name implies, a means of safety decelerating a falling body before a lower level is hit. The three (3) main components of a personal fall arrest system are the:

- a. anchorage point.
- b. lanyard.
- c. body harness.

NOTE: Body belts **will not** be used in a personal fall arrest system.

Specific personal fall arrest systems criteria are found in 29 CFR 1926.502(d) and we will use personal fall arrest systems that comply with the cited criteria.

The tie-off attachment point must be at or above the connection point on the harness to prevent additional free fall distance.

As are guardrails, personal fall arrest systems are “passive” and require no employee involvement once they are properly rigged.

For all practical purposes, dee-rings and locking type snaphooks shall have a minimum tensile strength of 5,000 pounds and lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. Anchorages must be capable of supporting 5,000 per employee. Anchorages used in personal fall arrest systems must be independent of any anchorage being used to support or suspend platforms.

NOTE: Knots in a rope lanyard or lifeline can reduce its strength by as much as 50% and having a lanyard go over or around sharp edges can completely destroy its effectiveness.

With the exception that harnesses and components may be used as positioning device systems, personal fall arrest system components may not be used for purposes other than that for which they were designed.

Positioning device system components shall be inspected prior to each use for wear, damage, and other deterioration and defective components shall be removed from service.

Personnel should be aware that should a fall occur and self rescue is not possible, equipment and personnel will be available for rescue.

Should a personal fall arrest system actually be used to stop a fall, it will be removed from service and not used again until inspected and determined to be undamaged and suitable for reuse by a competent person.

SAFETY NET SYSTEM:

Specific safety net systems criteria are found in 29 CFR 1926.502(c).

Safety nets will be installed as close as practicable under the walking/working surface on which employees are working and in no case shall they be more than 30 feet below such level.

Safety nets shall be inspected at least once per week and after an occurrence which could affect the integrity of the system. Defective nets will not be used.

All items that have fallen in a safety net will be removed as soon as possible and at least before the next work shift.

Safety nets will be drop-tested at the job site after initial installation and before being used as a fall protection system; whenever relocated; after major repair; and at six-month intervals if left in one place.

NOTE: If it is demonstrably unreasonable to perform a drop-test, a designated competent person shall prepare a certification in accordance with 29 CFR 1926.502(c)(4)ii.

WARNING LINE SYSTEM:

A warning line system is a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in the area.

A warning line system is to be used only during roofing work on low-sloped roofs over 50-feet in width with unprotected sides and edges 6-feet or more above lower levels (on a simple rectangular roof, width is the lesser of the two primary overall dimensions. This is also the case with roofs which are sloped toward or away from the roof center). Most importantly, warning line systems must be used in conjunction with either a guardrail system; a safety net system; a personal fall arrest system; or a safety monitoring system.

NOTE: In the above scenario, either a guardrail system, a safety net system, or a personal fall arrest system alone provides adequate fall protection.

Specific warning line systems criteria are found in 29 CFR 1926.502(f) and we will use warning line systems that comply with the cited criteria.

As a general rule, warning line systems will be used in conjunction with a safety monitoring system.

A warning line, made of ropes, wires, chains and supporting stanchions will be flagged at no more than 6-foot intervals with high-visibility material. As the name implies, this line will only “warn” employees that they are approaching an unprotected side or edge. The horizontal resisting force of a warning line is 16 pounds versus 200 pounds for a guardrail system.

No personnel are allowed in the area between a roof edge and a warning line unless they are performing roofing work in that area.

Mechanical equipment on roofs shall only be used in areas that are protected by either a warning line system, a guardrail system, or a personal fall arrest system.

The warning line shall be erected around all sides of the roof work area not less than 6-feet from the roof edge unless mechanical equipment is being used. In that case, the warning line shall be erected not less than 6-feet

from the roof edge which parallels the mechanical operation and not less than 10 feet from the roof edge which is perpendicular to the direction of the mechanical operation.

Points of access, material handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines. When the aforementioned areas are not in use, the warning line will be adjusted to completely seal off the work area so that a person cannot inadvertently enter the area.

SAFETY MONITORING SYSTEM:

Specific safety monitoring systems criteria are found in 29 CFR 1926.502(h) and we will use safety monitoring systems that comply with the cited criteria.

A safety monitoring system used in conjunction with a warning line system is not considered a “passive system” because it takes active employee involvement and, as such, both the Safety Monitor and the employee(s) being monitored must be alert for fall hazards.

A competent person will perform the duties of Safety Monitor. These duties include:

- a. recognizing fall hazards,
- b. warning the employee when it appears the employee is unaware of a fall hazard or is acting in an unsafe manner,
- c. remaining on the same walking/working surface and within visual sighting of the employee being monitored, and
- d. remaining close enough to communicate orally with the employee being monitored.

The Safety Monitor shall have no other responsibilities which could take the monitor’s attention from the monitoring function.

Only the employee engaged in roofing work on low-sloped roofs or an employee covered by a fall protection plan [29 CFR 1926.502(k)] is allowed in the area being protected by the Safety Monitor.

When a safety monitoring system is being used, mechanical equipment will not be used or stored in that controlled zone.

Of course, the employee being monitored is required to comply promptly with the fall hazard warnings from the Safety Monitor.

POSITIONING DEVICE SYSTEM:

A positioning device system consists of a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning. It is used during formwork and steel reinforcing.

Specific positioning device systems criteria are found in 29 CFR 1926.502(e) and we will use positioning device systems that comply with the cited criteria.

Positioning device systems must be inspected prior to each use for wear, damage, and other deterioration. Defective components must be removed from service. Components of positioning device systems must never be used for purposes other than that for which they were designed -- specifically fall protection and/or positioning on a vertical surface.

CONTROLLED ACCESS ZONE (CAZ):

A controlled access zone is an area in which certain work activity may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled.

Specific controlled access zone criteria are found in 29 CFR 1926.502(g). A controlled access zone will be created when appropriate.

Controlled access zones will only be used as part of a fall protection plan (reference 29 CFR 1926.502(k) and *Fall Protection Plan*, below) or when an employee is performing overhand bricklaying and related work. Persons performing overhand bricklaying or related work that requires reaching more than 10 inches below the walking/working surface may not be afforded fall protection by working in a controlled access zone.

Controlled access zones are work areas that have limited access to only authorized personnel by means of control lines or other means that restrict access.

COVERS:

Covers can prevent an employee from stepping into a hole, tripping over a hole, falling through a hole, or being injured by objects falling through a hole.

NOTE: When work is completed around a hole, the hole must be protected by guardrails on all sides of the hole or by covers.

Specific cover criteria are found in 29 CFR 1926.502(i) and we will use covers that comply with the cited criteria.

Covers must be capable of supporting, without failure, twice the weight of the employees, equipment, and/or materials that may be imposed upon them.

Covers, when used, must be secured to prevent accidental displacement by wind, equipment, or employees.

All covers must be color coded or marked with the word: "HOLE" or "COVER" to identify the hazard.

NOTE: The above does not apply to cast iron manhole covers or roadway steel grates.

Covers, and only covers, will be used on walking/working surfaces to protect employees from tripping or stepping into or through a hole (including skylights). This provision is **regardless of the height** of the hole above a lower surface.

Covers, and only covers, will be used to protect employees from objects falling through holes (including skylights). This provision is **regardless of the height** of the hole above a lower surface.

PROTECTION FROM FALLING OBJECTS:

Specific protection from falling objects criteria are found in 29 CFR 1926.502(j) and we will use that criteria to protect our employees from falling objects.

Covers are to be used to protect employees from objects falling through holes (including skylights) from upper surfaces regardless of heights.

Toeboards, used to prevent objects from falling on employees on a lower level must be at least 3½ inches high with not more than a ¼ inch clearance between the toeboard and the walking/working surface. When tools, materials, or equipment are piled higher than the top edge of the toeboard, paneling or screening will be erected from the top of the toeboard to the appropriate mid or top rail of the guardrail system to provide adequate protection to employees below.

FALL PROTECTION PLAN

The foregoing Fall Protection Program is not a Fall Protection Plan per se. However, implementing the preceding guidelines for conventional fall protection systems coupled with certified formal and hands-on training will provide appropriate fall protection for our employees.

There may be occasions where conventional fall protection systems just will not work. OSHA has determined that these occasions will be limited to:

- a. leading edge work.

NOTE: Leading edge work involves construction which moves the location of the edge forward (backward). Working at the edge of a walking/working surface (such as a roof) is not leading edge work - it is (roofing) work at an unprotected side or edge.

- b. precast concrete construction work.
- c. residential construction work.

The criteria for determination that conventional fall protection systems are infeasible are: 1) it is impossible to perform construction work using conventional fall protection systems, or 2) it is technologically impossible to use conventional fall protection systems. Inconvenience and cost are not acceptable considerations.

Specific Fall Protection Plan criteria are found in 29 CFR 1926.502(k) and, if necessary, a Fall Protection Plan will be completed that complies with the cited criteria.

Fall Protection Plans must be prepared by a qualified person and developed specifically for the site where the work is to be performed. All changes to the Plan must be approved by a qualified person.

NOTE: A qualified person is one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project. OSHA has indicated that an employer may use the services of more than one qualified person to comply with these requirements as long as (1) those persons, collectively, are qualified to prepare the fall protection plan and approve any changes; and (2) the resulting plan complies with the applicable requirements of the standards.

Fall Protection Plans must be maintained at the job site and be up to date.

The implementation of the fall protection plan must be under the supervision of a competent person.

A Fall Protection Plan must document reasons why conventional fall protection systems are infeasible and/or offer a detailed explanation why conventional fall protection systems create a greater hazard in their use than non-use.

All measures taken to reduce or eliminate fall hazards (in lieu of conventional fall protection systems) such as the use of ladders or scaffolds shall be discussed.

In each area where a conventional fall protection system cannot be used, a safety monitoring system must be utilized that conforms with the requirements of 29 CFR 1926(h).

Either the names of the employees or some other means of employee identification (such as armbands or color coded hard hats) will be used to control access to the controlled access zone.

In the event an employee falls or a serious incident occurs, the circumstances will be investigated and changes to the Fall Protection Plan will be made to prevent a reoccurrence of a similar incident.

After completion of all work and after all fall protection systems have been removed, a competent/qualified person may survey the work areas for inspection purposes without the use of fall protection systems. Care will be taken to assure solid footing and focused attention to potential fall hazards.

There are only two (2) instances where employees may be exposed to fall hazards without the use of fall protection systems. Those times are: pre-construction activities (inspecting, investigating, or assessing the workplace) and post-construction activities. During these times, no actual construction work may take place.

ACCIDENTS AND NEAR ACCIDENTS

Accidents and near accidents involving fall hazards will be investigated by the Fall Protection Program Administrator to determine the cause of the incident and a method of preventing a recurrence. Questions to be considered are:

- a. Was the fall protection system selected appropriate for the hazard?
- b. Was the system properly installed?
- c. Was the person involved in the accident following proper procedures?
- d. Were there contributing factors such as ice, wind, debris, etc.?
- e. Is retraining or a change of the Fall Protection Plan required?

TRAINING/RETRAINING

Training, which must be certified, will include the following topics:

- a. the nature of fall hazards in the work area.
- b. the correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection to be used.
- c. the use and operation of guardrail systems; personal fall arrest systems; safety net systems' warning line systems; safety monitoring systems' controlled access zones; and other protection to be used.
- d. the role of the Safety Monitor and the role of the employee when a safety monitoring system is used.
- e. the limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs.
- f. the correct procedures for handling and storage of equipment and materials and the erection of overhead protection.
- g. the role of employees in fall protection plans.

Training will be conducted by competent person(s) using the below listed items as resource materials:

- a. this Fall Protection Program.
- b. the manufacturer's instruction manuals that come with fall protection equipment.
- c. OSHA standards pertaining to fall protection which include 29 CFR 1926.500, 501, 502, and 503.
- d. the competent person's work experiences.

Should the competent person, a supervisor, or the Program Administrator suspect that an employee lacks the skills needed for proper fall protection, that employee will be retrained.

Changes in the workplace, types of fall protection systems and equipment will also necessitate retraining.

Only the latest Training Certificate will be kept on file.

FALL PROTECTION AT THE JOB SITE

A quick glance through this Fall Protection Program may leave the reader with the impression that fall protection requires an inordinate amount of attention to small details which, in practice, would render the fall protection provisions of subpart M, 29 CFR 1926 unworkable in real work situations.

The opposite is true. OSHA has gone to great lengths to make subpart M user friendly by incorporating performance-oriented criteria (as opposed to specification-oriented criteria) into their standards. Following a hazard assessment, we will select the most advantageous fall protection system that is compatible with our task needs and our protection requirements.

Lastly, while time, equipment, training, and money are devoted to fall protection systems which either physically prevent persons from falling from height, control the rate of deceleration during an actual fall, prevent objects from falling onto persons below, or warn personnel of restricted areas, we must never forget that it is important not to fall in the first place.

Accidents are more likely to occur as we become "adjusted" to working at height. Most slips, trips and falls are preventable. Proper footwear, wearing hard hats when there is a possibility of falling objects, cleaning up of debris, and paying attention to footing, hand holds, and edges is as important as the fall protection systems themselves.

ServiceBoss International, Inc.

FALL PROTECTION PLAN

(Required when standard fall protection systems are not feasible)

With changes: _____

(If no changes, enter "None")

This Fall Protection Plan is specific for the following project:

Project Name: _____

Location of Job: _____

Date Plan Prepared: _____ by: _____
(Must be a Qualified Person)

Date Plan Modified: _____ by: _____
(Must be a Qualified Person)

Date Plan Modified: _____ by: _____
(Must be a Qualified Person)

Plan Approved by: _____

Plan Supervised by: _____

POLICY STATEMENT

Our Fall Protection Program has been developed to protect our employees from the easily identifiable danger associated with working at height: falling. While the general concept of Fall Protection is straight forward, those employees to whom this Program applies must have specific training applicable to their individual jobs. It is recognized that the nature of fall hazards may vary from project to project and even change during a specific project. Training will be on-going to reflect the various existing work situations.

A copy of our Fall Protection Program can be found in the main office at:

RR 1 Box 232 Route 407
Dalton, PA 18414

A copy of our Fall Protection Plan will be found on every applicable Job Site.

FALL PROTECTION SYSTEMS TO BE USED ON THIS JOB

All employees on this job/project will be protected from fall hazards by the use of one or more conventional fall protection systems. These systems include guardrail systems; safety net systems; personal fall arrest systems; positioning device systems; warning line systems; controlled access zones; safety monitoring systems; covers; and protection from falling objects.

Further, the conventional fall protection system used in each required circumstance will be in compliance with 29 CFR 1926.502 which addresses which systems are appropriate (allowed) for specific types of work.

TRAINING

All our personnel working on this job/project have received training in the our Fall Protection Program and are able to recognize fall hazards and understand procedures to minimize these hazards. Further, they have been trained, as necessary, by a competent person qualified in the following areas using both formal and hands on training:

- a. The nature of fall hazards in the work area.
- b. The procedures for erecting, maintaining, disassembling, and inspecting the fall protections to be used.
- c. The use and operation of guardrail systems; personal fall arrest systems; safety net systems' warning line systems; safety monitoring systems' controlled access zones; and other protection to be used.
- d. Their role in the safety monitoring system when this system is used.
- e. The limitations on the use of mechanical equipment during the performance of roofing work on low sloped roofs.
- f. The procedures for handling and storage of equipment and materials and the erection of overhead protection.
- g. The roll of employees in fall protection plans.

ENFORCEMENT

Awareness of and respect for fall hazards, and compliance with all safety rules are of great importance. Appropriate disciplinary action will be taken should an employee disregard our safety guidelines.

ACCIDENT INVESTIGATION

All accidents that result in injury to employees, regardless of their nature, will be investigated and reported. It is important that documentation of accidents take place as soon as possible so that the cause may be determined and steps may be taken to prevent a reoccurrence.

CHANGES TO THIS PLAN

Changes to this plan, specifically a deviation from conventional fall protection systems, will be documented by a qualified person whose name appears on the front of this fall protection plan.

Changes will be limited to:

- a. leading edge work.

NOTE: Leading edge work involves construction which moves the location of the edge forward (backward). Working at the edge of a walking/working surface (such as a roof) is not leading edge work - it is (roofing) work at an unprotected side or edge.

- b. precast concrete construction work.
- c. residential construction work.

The criteria for determination that a conventional fall protection is infeasible is that it is impossible to perform construction work with a conventional fall protection system or it is technologically impossible to use a conventional fall protection system. Inconvenience and cost are not acceptable considerations.

Specific Fall Protection Plan criteria are found in 29 CFR 1926.502(k) and we will, if necessary, create a Fall Protection Plans that comply with the cited criteria.

A separate change will be made for each situation where conventional fall systems cannot be used.

CHANGE TO FALL PROTECTION PLAN

CHANGE NUMBER: _____

This change to the Fall Protection Plan for the below listed project will be attached to the original Fall Protection Plan and a copy will be available at the job site.

Project Name: _____

Location of Job: _____

Date Change Prepared: _____ by: _____
(Must be a Qualified Person)

Date Change Modified: _____ by: _____
(Must be a Qualified Person)

Change Approved by: _____

Change Supervised by: _____

Reference the above.

Changes to this Fall Protection Plan for this specific project are required for the following reason(s):

Specific work that requires fall protection other than conventional fall protection:

Specific work areas where the above work will take place:

Before any non-conventional fall protections are used as part of the work plan, a controlled access zone (CAZ) shall be clearly defined by the competent person _____ as an

(Name(s) of Competent Person)

area where a recognized hazard exists. The demarcation of the CAZ will be communicated by the competent person in a recognized manner such as:

Circle one or more of the below:

- a. signs
- b. wires
- c. tapes
- d. ropes
- e. chains
- f. other: _____

All access to the CAZ will be restricted to authorized entrants. Those entrants will be identified by _____

(Color hard hats; arm bands, etc.)

and are listed below:

The competent person will ensure the protective elements of the CAZ are implemented prior to the beginning of work.

Specific reasons why conventional fall protection is either infeasible or creates a greater hazard:

Specific measures to be taken to reduce or eliminate fall hazards for personnel who cannot be provided conventional fall protection:

In the above CAZ, a safety monitoring system will be implemented in conformance with 29 CFR 1926.502(h).

ServiceBoss International, Inc.
Environmental, Health & Safety Program

SAFETY NET INSTALLATION CERTIFICATION

This is to certify that the Safety Net identified below was installed with sufficient clearance under it to prevent contact with the surface or structures below when subjected to an impact force equip to the drop test specified in 29 CFR 1926.502(c)(4)(i).

SAFETY NET MAKE: _____

SAFETY NET MODEL: _____

SAFETY NET LOCATION: _____

It was found to be unreasonable to perform the below listed drop test for the following reasons:

Drop Test (Circle appropriate drop test to which the certification applies):

- a. After initial installation and before using drop test.
- b. After relocation drop test.
- c. After major repair drop test.
- d. After remaining in the same location for 6 months drop test.

(Competent Person)

(Date)

ServiceBoss International, Inc.
HAZARD COMMUNICATION

ServiceBoss International, Inc.

Safety Program

SECTION III

HAZARD COMMUNICATION

INDEX

TOPIC	PAGE
OVERVIEW	1
DEFINITIONS	1
CHEMICAL TYPES AS THEY RELATE TO HEALTH	3
HAZARD DETERMINATION	4
LABELS	5
MATERIAL SAFETY DATA SHEETS (MSDS)	6
LIST OF HAZARDOUS CHEMICAL PRODUCTS	8
TRAINING AND DOCUMENTATION	8
NON-ROUTINE TASKS	9
CHEMICALS IN UNLABELED PIPES	9
SHARING OF INFORMATION	9

OSHA Standards:

29 CFR 1926.59, *Hazard Communication*

29 CFR 1910.1200, *Hazard Communication*

29 CFR 1910.1200 *Appendix A, Health Hazard Definitions (Mandatory)*

29 CFR 1910.1200 *Appendix B, Hazard Determination (Mandatory)*

29 CFR 1910.1200 *Appendix C, Information Sources (Advisory)*

Note: The Federal Register of March 7, 1996,
removed 1926.59 Appendix C., [61 FR 9227, March 7, 1996]

29 CFR 1910.1200 *Appendix D, Definition of Trade Secret (Mandatory)*

29 CFR 1910.1200 *Appendix E, Guidelines for Employer Compliance*

Forms:

[Found immediately following this program]

Letter - Request for MSDS

List of Hazardous Chemicals

OVERVIEW

Petroleum products, adhesives, sealants -- even saw dust from treated wood! What do these typical job site products have in common? They are all chemicals and their properties may cause harm to an employee if inhaled, ingested, or absorbed into the skin. A common error is thinking that a hazard communication plan is not needed because there are no "hazardous" chemicals such as nitroglycerin or sulfuric acid on the job site. Hazard communication addresses the health and physical hazards associated with essentially all the chemical and chemical products found on the job site.

There may be a tendency to think of common everyday products such as hand cleaners as just that -- hand cleaners. However, even these items are job site chemicals and, if misused, have a health hazard. What possible hazard could be associated with hand cleaner? Quick! Some gritty hand cleaner gets in your eye! What do you do?

This hazard communication plan is designed to make all employees aware that most, if not all, job site chemicals have a downside if improperly used, spilled, transferred or stored. The hazard may be a physical hazard such as an explosion or a health hazard such as cancer.

DEFINITIONS

Article:	a manufactured item which is formed to a specific shape or design during manufacture; has end use function(s) dependent in whole or in part upon its shape or design during end use; and does not release, or otherwise result in exposure to a hazardous chemical under normal conditions of use.
[Note: Articles are exempt from the Hazard Communication standard]	
Hazardous Chemical:	any chemical which is a physical or a health hazard.
Physical Hazard:	a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric (will ignite spontaneously in air at a temperature of 130°F or below), unstable (reactive) or water-reactive.
Health Hazard:	a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principals that acute or chronic health effects may occur in exposed employees.

To clarify the difference between acute and chronic, acute effects occur rapidly as a result of short term exposure and are of short duration. Chronic effects occur as a result of long term exposure and are of a long duration. These terms can overlap. For example, a mild heart attack, with no pain severity, would be termed acute within the first two hours, yet if there were long term effects, it would be termed chronic.

Exempt from hazard communication are “articles”. Note that a manufactured item that has a downstream use is not an article. The below example from 29 CFR 1926.59(f)(2) illustrates this point:

For a solid metal (such as a steel beam or a metal casting) that is not exempted as an article due to its downstream use, the required label may be transmitted to the customer at the time of the initial shipment, and not be included with subsequent shipments to the same employer unless the information on the label changes. The label may be transmitted with the initial shipment itself, or with the material safety data sheet that is to be provided prior to or at the time of first shipment. This exception to requiring labels on every container of hazardous chemicals is only for the solid metal itself and does not apply to hazardous chemicals used in conjunction with, or known to be present with the metal and to which employees handling the metal may be exposed (for example, cutting fluids or lubricants).

Almost all chemicals are considered hazardous -- a steel beam or metal casting does not immediately come to mind as a hazardous chemical. Without a material safety data sheet (MSDS) and/or a label, one cannot assume a chemical is safe.

Even filters for your equipment will have an MSDS. This is because, until it is placed in your equipment, it still has a down stream use and therefore until it is used it is not an article by definition.

Also exempt from the hazard communication standard are chemicals which are regulated by other government agencies such as hazardous waste, food, tobacco products, and normal consumer products that are used in the workplace in the same manner, frequency and duration as normal consumer use and produces the same or less exposure as normal consumer use.

CHEMICAL TYPES AS THEY RELATE TO HEALTH

Below is a list of categories of hazardous chemical types as they relate to health:

- a. Carcinogen or potential carcinogen as determined by the International Agency for Research on Cancer (IARC) or a carcinogen or potential carcinogen as listed in the Annual Report on Carcinogens published by the National Toxicology Program (NTP), latest edition, or as regulated by OSHA as a carcinogen.
- b. Corrosive: A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. This is not to be confused with, and does not refer to, action on inanimate surfaces.
- c. Highly Toxic: A chemical which is lethal to test animals under specific doses and time limits. Some tests require ingestion, some inhalation, some skin exposure, and some implantation.
- d. Irritant: A chemical which is not a corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.
- e. Sensitizer: A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure.
- f. Toxic: A chemical which is lethal to test animals under specific doses and time limits. A toxic chemical has a greater dose per weight than a Highly Toxic chemical.

g. Target Organ Effects:

Hepatotoxins: Chemicals which produce liver damage

Signs & Symptoms: Jaundice; liver enlargement

Chemicals: Carbon tetrachloride; nitrosamines

Nephrotoxins: Chemicals which produce kidney damage

Signs & Symptoms: Edema; proteinuria

Chemicals: Halogenated hydrocarbons; uranium

Neurotoxins: Chemicals which produce their primary toxic effects on the nervous system

Signs & Symptoms: Narcosis; behavioral changes; decreased motor function

Chemicals: Mercury; carbon disulfide

Agents which act on the blood or hemotopietic system: decrease hemoglobin function; deprive the body tissue of oxygen

Signs & Symptoms: Cyanosis; loss of consciousness

Chemicals: Carbon monoxide; cyanides

Agents which damage the lungs: chemicals which irritate or damage the pulmonary tissue

Signs & Symptoms: Cough; tightness in the chest; shortness of breath

Chemicals: Silica; asbestos

Reproductive toxins: Chemicals which affect the reproductive capabilities including chromosomal damage (mutations) and effects on fetuses (teratogenesis)

Signs & Symptoms: Birth defects; sterility

Chemicals: Lead; DBCP

Cutaneous hazards: Chemicals which affect the dermal (skin) layer of the body

Signs & symptoms: Defatting of the skin; rashes; irritation

Chemicals: Ketones; chlorinated compounds

Eye hazards: Chemicals which affect the eye or visual capacity

Signs & Symptoms: Conjunctivitis; corneal damage

Chemicals: Organic solvents; acids

The above is to illustrate the broad scope of health hazards.

HAZARD DETERMINATION

The determination of chemical hazards is primarily the responsibility of the manufacturer and/or importer. It is performance-oriented and, surprisingly, there is no specific method required to determine if a chemical or chemical mixture is hazardous. Personal judgment of the evaluator is relied upon and it takes but one scientifically acceptable study to force a chemical onto the hazardous chemical list.

According to OSHA regulations, thousands of studies could indicate complete safety and one study indicate a hazard and the chemical will be deemed a hazard. We will rely on the evaluations of the chemical product's manufacturers or importers. Should hazard information be received from a source other than the manufacturer, it shall be placed in this Hazard Communication Plan.

LABELS

A label is any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.

All chemicals used in or on the job site will be properly labeled using the manufacturer's labeling system. Labels will not be removed or defaced. If a chemical is not labeled, it will not be used with the following exception which is quite common with contractors:

portable containers into which hazardous chemicals are transferred from labeled containers need not be labeled if they are for immediate use of the employee who makes the transfer.

To simplify the above, one may take a hazardous chemical (*example*: paint) out of a labeled container and put it into a smaller, unlabeled container (*example*: paint tray), for immediate use. OSHA defines "immediate use" as being under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

The label must clearly state:

- a. the identity of the hazardous chemical(s).
- b. the appropriate hazard warning.
- c. the name and address of the manufacturer.

Appropriate hazard warnings would contain:

- a. instruction for proper and safe use. This would include obvious information such as, "do not ingest" or "do not spray in eyes" as well as less obvious information such as, "caustic, wear rubber gloves"
- b. first aid instructions
- c. fire containment instructions
- d. storage
- e. disposal instructions

Treat empty containers of hazardous materials as if they were full. Proper disposal is a must!

MATERIAL SAFETY DATA SHEETS (MSDS)

It is required that material safety data sheets (MSDS) be maintained for all hazardous chemicals in our inventory. The information contained on MSDS must be readily accessible to the individual(s) using the products and we will share that information with whom we may work.

Chemicals come in all forms of matter: liquid, solid, and gas; they can be found as sludge, vapor, mist, dust, etc..

How would one know what a chemical smelled or looked like? How would one be able to administer first aid quickly? Where would you find the proper procedure for cleaning up a spill? Where would you find a listing of symptoms caused by inadvertent exposure to a chemical or chemical mixture? Where would you find fire fighting procedures? These questions and many others are answered on Material Safety Data Sheets (MSDS).

The Safety Director will be notified immediately if a chemical is in inventory without an MSDS. Should that event occur, the Safety Director will submit a letter to the manufacturer or distributor requesting an MSDS.

Personnel utilizing a new chemical product will review the MSDS before initial use. New chemical products will be added to our List of Hazardous Chemicals.

While there is no specific format, the following information will be found on an MSDS:

- a. identity (chemical or common name) which will be the same as on the label and on the required list of hazardous chemicals.
- b. hazardous chemical ingredients -- both the chemical and common name(s).
- c. physical and chemical characteristics such as boiling point, flash point, solubility in water, etc.. Two of the most important items to be found in this category are appearance and odor. It is important to be able to identify chemicals rapidly and appearance and odor are of great value in initial determination.
- d. physical hazards which would include the potential for explosion, fire, and reactivity. Also included in this section are the flash point and auto ignition temperature. Special fire fighting procedures are also noted and should be carefully studied by potential users.

- e. health hazards which include first aid procedures, signs and symptoms of exposure, medical dangers, exposure limits, routes of entry, precautions for safe handling, potential carcinogen information, and whether professional medical response is required after a mishap.
- f. chemical reactivity which includes stability, incompatibility with other chemicals, hazardous decomposition products and hazardous polymerization. Special conditions to avoid may also be included.
- g. spill and/or leak procedures which include approved waste disposal methods.
- h. special handling information which includes appropriate hygienic practices, protective equipment requirements, and needed ventilation.
- i. special precautions which would include applicable control measures known to the manufacturer and/or importer. Should it be determined there are special advisories that pertain to our company, the advisories will be placed in this section of the MSDS.
- j. the name, address and telephone number as well as the date of preparation or revision must be included.

Of course, you are not required to memorize nor are you expected to know all the information contained therein; however, you are expected to know where to find information when it is needed and you are expected to ask any questions to clear up any uncertainties that you may have concerning chemicals in the workplace.

Particular attention should be paid to:

- a. Identification/detection of a hazardous chemical. This would include odor and color as well as container labeling.
- b. Physical hazards of the hazardous chemical. This information would include the potential for fire, explosion, and reactivity. Reactivity, in chemistry, is defined as "the reciprocal action of chemical agents upon each other; chemical change." The MSDS will indicate proper procedures for fire extinguishing, including special precautions, if needed.
- c. The health hazards of the chemical. Routes of entry are noted. A chemical may enter the body through ingestion, inhalation, absorption, or injection. Signs and symptoms are indicated such as irritation of the skin, redness of the eyes, nausea, etc.. Health hazards are defined as acute, chronic or both. Carcinogenicity is

indicated. First Aid procedures are explained as well as notes to a treating physician, if appropriate.

Methods to lessen or prevent exposure are explained. The need for protective equipment such as rubber gloves, disposable suits, respirators, goggles, etc. is explained. Hygienic work practices are re-enforced such as keeping the product away from food and washing hands after use.

The MSDS has a wealth of information which is to be made available to all employees and to anyone who wants to review them. There is nothing secret about an MSDS; its whole purpose is the dissemination of information. It provides awareness.

Should an employee not be able to read English, the information contained on MSDS and labels (and any other warning sign) will be given orally or written in that employee's language. The actual labels, MSDS, and all warning signs must be written in English.

LIST OF HAZARDOUS CHEMICAL PRODUCTS

A list will be maintained of all hazardous chemical products in our inventory. This list will be arranged alphabetically by trade or common name and be readily available to our employees. This will also be the order in which our MSDS are filed.

TRAINING AND DOCUMENTATION

The Safety Director is responsible for employee training and will ensure that all new employees attend training on our Hazard Communication Plan prior to initial work assignment. Training shall include:

- a. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area. The primary method to detect the presence of a release is sight and smell. As mentioned above, the appearance and odor of a hazardous chemical can be found on the MSDS for that chemical.
- b. Physical and health hazards of the chemicals in the workplace. Again, this information is found on the appropriate MSDS.
- c. Measures to take to protect the employee from chemical hazards. This Hazard Communication Program, the specific MSDS, as well as oral and hands on training and instruction provide the basis for measures to protect one's self. Where required protective equipment will be provided. Never minimize the value of protective safety equipment. For example, the use of relatively inexpensive eye protection could easily save your eyesight.

Each employee will sign a form indicating that they have attended training and understand the above.

Annually, all employees will receive refresher training to ensure that awareness is maintained. Furthermore, with the introduction of each new hazard, not necessarily each new chemical, training will be given with specific emphasis on emergency procedures as noted on the MSDS. This training will include procedures for handling leaks and spills, personal protection equipment if required, decontamination procedures, etc..

NON-ROUTINE TASKS

Prior to performing a non-routine task, an employee will be given information by a competent person or supervisor concerning the hazardous chemicals to which he may be exposed. This information will include:

- a. Specific chemical hazards
- b. Protective/safety measures the employee may take.
- c. Measures taken to lessen the hazards including ventilation, respirators, presence of another employee and emergency procedures.

CHEMICALS IN UNLABELED PIPES

Should work activities be performed in areas where chemicals are transferred through unlabeled pipes, the employee shall be informed by the competent person or supervisor of:

- a. The chemical in the pipes.
- b. Potential Hazards.
- c. Safety precautions to be taken.

SHARING OF INFORMATION

The competent person on the job site will inform those with whom we work of any hazardous chemical products we are using and will provide them with the appropriate MSDS for their review. MSDS for all chemical products used on the job site will be readily available.

Should we introduce a new chemical product to the job site that contains a physical or health safety hazard, the product's MSDS will accompany that product and, before use, employees will be given instruction on the products hazards. This information will be shared with other contractors with whom we may be working. Employees are to be kept informed of the chemical products being used by other contractors if they pose a safety hazard.

ServiceBoss International, Inc.

RR 1 Box 232 Route 407
Dalton, PA 18414

(Date)

(Supplier)

(PO Box/Street Address)

(City, State, ZIP)

Dear Sir:

On _____, we received a shipment of _____,
(Date) (Product Name)
reference invoice: _____.
(Invoice Number)

The above product was received without an accompanying Material Safety Data Sheet (MSDS). Per 29 CFR 1926.59, we are unable to use this product without its MSDS.

Please furnish the appropriate MSDS as soon as possible.

Thank you,

Safety Director

ServiceBoss International, Inc.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

[General]

ServiceBoss International, Inc.

Safety Program

SECTION III

PERSONAL PROTECTIVE EQUIPMENT (PPE)

[General]

INDEX

TOPIC	PAGE
OVERVIEW	1
DUTIES OF THE PPE PROGRAM ADMINISTRATOR	1
HAZARD ASSESSMENT AND PPE SELECTION	1
DISSEMINATION OF PPE SELECTION INFORMATION	2
ANSI STANDARDS AND PPE	2
SIZING AND FITTING	3
CARE AND MAINTENANCE OF PPE	4
TRAINING	4
EYE AND FACE PROTECTION	5
HEAD PROTECTION	6
HEARING PROTECTION	7
FOOT PROTECTION	9
HAND PROTECTION	9
MISCELLANEOUS PERSONAL PROTECTION	10
RESPIRATORY PROTECTION	10
SUMMARY	10

OSHA Standards:

29 CFR 1910.136, *Occupational Foot Protection*

29 CFR 1910.138, *Hand Protection*

29 CFR 1926.28, *Personal Protective Equipment*
(w/29 CFR 1910.132, *General Requirements*)

29 CFR 1926.95, *Criteria for Personal Protective Equipment*

29 CFR 1926.100, *Head Protection* (w/29 CFR 1910.135, *Head Protection*)

29 CFR 1926.101, *Hearing Protection* (w/ 29 CFR 1926.52, *Occupational Noise Exposure*)

29 CFR 1926.102, *Eye and Face Protection* (w/29 CFR 1910.133, *Eye and Face Protection*)

29 CFR 1926.107, *Definitions Applicable to this Subpart*

Forms:

[Found immediately following this program]

Certificate of Workplace Hazard Assessment

OVERVIEW

This Personal Protective Equipment (PPE) Program has been prepared to inform our employees of potential hazards in the workplace and to identify the proper PPE to be used to reduce or eliminate these hazards. This Program relies on a cooperative effort by all personnel to understand the reasons for PPE and to protect themselves from harm.

The use of PPE does not lessen an employee's obligation to use safe work practices and procedures. Employees are expected to be aware of the hazards within their area of responsibility and properly use prescribed PPE.

Our operations, work methods and individual job sites present specific hazards which must be identified, analyzed, and matched with the appropriate PPE through a continuing hazard assessment process.

A Certificate of Hazard Assessment will be kept on the job site for inspection purposes.

DUTIES OF THE PPE PROGRAM ADMINISTRATOR

The primary duties of the Program Administrator include: hazard assessment; PPE selection; PPE training; and monitoring of our PPE Program. Certain types of PPE may require hands-on training before on the job use (primarily for sizing and fitting) and this training may be further delegated to competent persons.

HAZARD ASSESSMENT AND PPE SELECTION

A careful, systematic personal protective equipment selection process is used to identify what, if any, protection is required to reduce or eliminate the possibility of eye, hand, foot, limb, or head injury.

Hazard assessment, performed by the PPE Program Administrator or a designated competent person, starts with a thorough knowledge of our job sites, work procedures and methods of operation as well as the hazards that may be created by other contractors working in the vicinity of our employees. The basic hazard categories are: impact; penetration; compression; chemical; heat; harmful dust; and light radiation.

Identifying the source of the above hazards allows for consideration of administrative or engineering controls to eliminate the hazard as opposed to providing protection against it. Examples would include: redirecting traffic flow, ventilation, temporary weather barriers, non-slip surfaces, etc..

Because administrative and engineering controls are passive -- no employee involvement is required -- they are preferable to PPE.

A PPE selection is made by analyzing the above information and evaluating the type of risk, the level of risk, the potential for injury and the possible seriousness of that injury. PPE, which is compatible with the above risks and work situation, is considered. Actual selection involves all the above factors plus an attempt to provide a level of protection greater than the minimum required.

In all situations where it has been determined that a particular type of PPE is to be used, it will be used. There will be no exceptions by virtue of position or rank to this policy. Within an area on a job site where the possibility of falling objects exists, hard hats will be worn. It follows that once an item of PPE (hard hat, in this case) is selected, it must be used by all persons in the identified area regardless of job title or function.

Having the PPE Program Administrator or designated competent person on a job site determine the PPE requirements allows for knowledgeable selection and consistency, and eliminates chaos that would result if each individual were to decide when, where, and if PPE should be used.

29 CFR 1910 Subpart I, Appendix B, *Non-mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection*, provides excellent selection guidelines for eye and face protection; head protection; foot protection; and hand protection.

DISSEMINATION OF PPE SELECTION INFORMATION

Employees must understand when PPE is necessary and what type(s) of PPE are necessary.

All persons for whom PPE will provide a measure of safety will be given appropriate training on that item of PPE as well as an explanation of the importance of its use.

ANSI STANDARDS AND PPE

Most items of PPE are manufactured in accordance with a specific American National Standards Institute (ANSI) standard. For example, protective eye and face devices purchased after 07/05/94 must comply with ANSI standard ANSI Z87.1-1989, *American National Standard Practice for Occupational and Educational Eye and Face Protection*; protective helmets purchased after 07/05/94 must comply with ANSI standard ANSI Z89.1-1986, *American National Standard for Personnel Protection-Protective Headwear for Industrial Employees-Requirements*.

PPE safety products are tested to ensure they meet ANSI standards. Because products are tested in the manner in which they are designed to be used, ANSI certification is valid only if the user follows the manufacturer's instructions for proper sizing, fitting, wearing, and adjusting. A review of

OSHA citations reveals that fines can be levied because employees were improperly using PPE. For example, a hard hat worn with the bill toward the rear may provide adequate protection from impact, however, because it is tested with the bill toward the front, this improper use is cause for a safety violation.

Prior to purchase, items of selected PPE will be checked to ensure they were manufactured in accordance with the proper ANSI standard.

The importance of hazard assessment takes on added significance when judgments are made matching the hazard to the protection desired in cases where ANSI certification is not available. What matters most is: does the selected PPE do what it is intended to do?

Employee owned PPE must be approved for use by the PPE Program Administrator. Further, such equipment must be properly maintained and cleaned in accordance with the manufacturer's instructions.

SIZING AND FITTING

The word "personal" in the phrase "personal protective equipment" correctly implies that the equipment is for a specific person. As such, sizing and fitting are important for a variety of reasons.

- a. **Function:** an improperly fitted piece of PPE may not do its job. For example, eye protection against dust must have an excellent face seal.
- b. **Comfort:** the likelihood of continued use is increased if the PPE selected is comfortably fitted. Example: gloves that fit poorly and, over time, make a person's hands hot and clammy are likely to be removed exposing that person to the hazard for which the gloves were required in the first place.
- c. **Safety:** ill-fitting PPE may actually cause an accident. Example: loose hard hat may slip and block one's vision.

Most PPE come in a variety of sizes and within those size groups, adjustments may be made to affect a perfect fit. It is important to understand the procedures for donning, adjusting, using, and removing PPE. Each person who is required to use any type of PPE will be taught, before initial issue, the specific procedures for properly donning, adjusting, using, and removing the specific PPE. This instruction will generally be given by the employee's Supervisor. When available, the manufacturer's instructions will be issued with the PPE.

CARE AND MAINTENANCE OF PPE

PPE will be visually inspected before each use and if defects are noticed, it will not be used. Some types of PPE are expendable (cotton gloves) and have a limited life span after which they are discarded and new PPE is reissued. Plastic safety glasses become scratched and they too must be exchanged for new ones when vision is impaired. Other types of safety equipment consist of both non-expendable and expendable components. A hard hat is non-expendable, yet the head band does wear out and becomes expendable. PPE will be maintained in accordance with the manufacturer's instructions and, where appropriate, kept in a sanitary condition.

Cleanliness takes on an added importance when dealing with PPE designed to protect the eyes and face. Dirty or fogged lenses can impair vision and, rather than offer protection from a hazard, actually becomes a contributory factor in causing an accident.

Lastly, should PPE become contaminated with a chemical substance and decontamination is impossible, the PPE will be properly disposed of following the disposal instructions on the Material Safety Data Sheet for that substance.

TRAINING

Affected employees will be given an understanding of:

- a. when PPE is necessary;
- b. what PPE is necessary;
- c. how to properly put on, take off, adjust, and wear PPE;
- d. the limitations of the PPE; and,
- e. the proper care, maintenance, useful life and disposal of the PPE.

Retraining will be given in situations when changes in PPE requirements render the previous training obsolete or it is noticed that an employee is not following our PPE policies -- specifically, not properly wearing the selected PPE in identified locations or work situations.

As a contractor, we are not required to have a PPE Program, per se, nor is the hazard assessment a specific requirement. In fact, there is no hand

protection standard. Construction standards are short and to the point. The complete standard for head protection is printed below:

Standard Number: 1926.100
Title: Head protection.
Applicable 1910 Standards 1910.135
(a) Employees working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, shall be protected by protective helmets.
(b) Helmets for the protection of employees against impact and penetration of falling and flying objects shall meet the specifications contained in American National Standards Institute, Z89.1-1969, Safety Requirements for Industrial Head Protection.
(c) Helmets for the head protection of employees exposed to high voltage electrical shock and burns shall meet the specifications contained in American National Standards Institute, Z89.2-1971.

Most PPE requirements are obvious and PPE wear is so simple that training is almost unnecessary.

What is important -- vitally important -- is actually using the proper PPE when it is required.

To ensure employee compliance with PPE requirements, we have opted to treat all employees as intelligent, responsible persons who, when reminded of what PPE actually protects, will enthusiastically endorse PPE use.

EYE AND FACE PROTECTION

Your eyes are a marvel of engineering. Most of us take them for granted as we do all our senses until an accident, injury, or disease forces us to realize the miracle we lost or almost lost. Can you imagine a system that can take (absorb) light and convert it to electrical signals (by way of the 120 million rods and 6 million cones on the retina) and transfer these signals through an optic nerve which has about one million fibers directly into the brain?

Most of us see the world in living color and with depth perception. The body itself does much to protect the eyes. Bony eye sockets in the skull protect the eye from many mechanical injuries. Orbital fluids and tissues cushion direct blows. Eyelids close reflexly from visual or mechanical stimuli. Eyes reflexly rotate upward with the lid closing to protect the cornea. Tears can flush away chemicals and foreign bodies. We all come with these safeguards. Sometimes, they are not enough.

Eye protection is required when there is a possibility of eye injury. Eye injury is not confined to flying objects. Eye injury can be caused by bright light, dust, chemicals, heat, and, literally, anything that can reach them. Different hazards require different types of protection.

Eye (and face) protection is required when one is exposed to flying particles, chemicals, or injurious light radiation. Types of eye protection include: impact resistant safety glasses; safety glasses with side shields; goggles; goggles with a face seal; face masks; and shaded goggles with varying degrees of darkness.

Affected employees who wear prescription lenses will wear eye protection over the prescription lenses without disturbing the proper positioning of the prescription lenses, or will wear eye protection that incorporates their prescription into the design.

All prescription glasses should be made with impact-resistant lenses. Hardened lenses, through a tempering process, are extremely hard and resistant to impact and breakage. Safety lenses are similar to hardened lenses but are 1 mm thicker. Safety lenses are used in goggles where there is a danger of flying glass or chips of metal.

All employees who wear contact lenses must also wear appropriate eye and face protection in hazardous environments.

Welding helmets and faceshields, if required, should be worn over primary eye protection (spectacles or goggles).

An inexpensive pair of safety glasses can save your priceless eyesight.

HEAD PROTECTION

Talking about head protection is really talking about brain protection. Your brain, either through divine providence, evolution, or quirk of nature, is you. The brain, that soft mass of gray and white convoluted matter, is what you are all about. Destroy your brain and you no longer exist.

Your brain is naturally protected by a cranium. Your skull actually has many bones which protect your brain and support your face. Obviously, there are other parts to your head which need protecting such as your eyes, ears, nose, tongue, skin, etc., but your brain is the most important.

Head protection is required when there is a possibility of injury to the head from falling objects and when working near exposed electrical conductors which could contact the head.

Brain injury is the second most common cause of major neurologic deficits and causes more deaths than injury to any other organ.

When the skull receives an impact, it actually can indent and deform. A fracture may occur and the fracture may be distant from the point of impact.

A direct blow to the head can cause the brain to actually move within the skull. Surprisingly, there is often a reverse correlation between skull damage and brain damage. Just because there is no external visible injury to the skull does not preclude the possibility of brain injury.

Wearing head protection (a hard hat) accomplishes two major objectives: it reduces the rate of energy transfer and spreads out the area of energy transfer. Just as your head should be checked out at a hospital after a head impact, so should your hard hat. A hard hat can absorb energy by destructing and this destruction may be unnoticeable.

A head injury may occur after a blow to the head and the following symptoms may be present: unconsciousness or disorientation, confusion, nausea, vomiting, and/or double vision. Get medical help immediately. Cover open wounds lightly with sterile dressing. Keep victim still, warm, and reassured. DO NOT move the victim unless he/she would be in greater danger if you did not. DO NOT apply pressure to a head wound. DO NOT try to stop blood or clear fluid coming from ears, nose, or mouth.

HEARING PROTECTION

Wherever it is not feasible to reduce the noise levels or duration of exposures to those specified in Table D-2, below, ear protective devices shall be provided and used.

Ear protective devices inserted in the ear shall be fitted or determined individually by competent persons.

Plain cotton is not an acceptable protective device.

<u>Sound level</u> <u>Duration per day, hours</u>	<u>dBA slow response</u>
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Hearing damage is caused by noise level and duration of exposure to the noise. If, after using the formula below, the equivalent noise exposure exceeds unity (1), then a Hearing Conservation Program will be initiated.

$F(e) = (T(1) \text{ divided by } L(1)) + (T(2) \text{ divided by } L(2)) + \dots + (T(n) \text{ divided by } L(n))$ where:

F(e) = The equivalent noise exposure factor.

T = The period of noise exposure at any essentially constant level.

L = The duration of the permissible noise exposure at the constant level (from Table D-2).

If the value of F(e) exceeds unity (1) the exposure exceeds permissible levels.

A sample computation showing an application of the formula in paragraph (d)(2)(ii) of this section is as follows. An employee is exposed at these levels for these periods:

110 db A 1/4 hour.

100 db A 1/2 hour.

90 db A 1 1/2 hours.

$F(e) = (1/4 \text{ divided by } 1/2) + (1/2 \text{ divided by } 2) + (1 \ 1/2 \text{ divided by } 8)$

$F(e) = 0.500 + 0.25 + 0.188$

$F(e) = 0.938$

Since the value of F(e) does not exceed unity, the exposure is within permissible limits.

Understanding some interesting facts about your hearing will emphasize the need for hearing protection.

Your outer ears on the side of your head are the least important part of your hearing system. Should you lose your ear, you would not necessarily lose your hearing. Your outer ear, made of cartilage, includes the external auditory canal which leads to the eardrum which is only 2/5" in diameter. The eardrum separates the outer ear from the middle ear. Within the middle ear are three (3) bones commonly called the hammer, anvil, and stirrup. The stirrup (stapes) is the smallest bone in your body -- thinner than a grain of rice. Also in the middle ear is the Eustachian tube which connects the middle ear to the back of the throat to maintain equal air pressure on both sides of the ear drum.

The inner ear, where sound waves are converted to electrical impulses, actually has a function unrelated to hearing. It contains the semicircular canals which completely control your balance. Also in the inner ear is the cochlea, a small spiral coil in which you would find the basilar membrane which has over 15,000 hair cells. These hair cells are the end of the auditory nerve which goes directly to the temporal lobe of the brain.

The hardest bone in your whole body is the temporal bone which protects two thirds of the auditory canal and all of the middle and inner ear. Nature, itself, seems to have placed a high priority on your hearing.

Protect your hearing. If you are issued hearing protection, use it!

FOOT PROTECTION

When purchasing new protective footwear, ensure that it complies with ANSI Z41-1991, "American National Standard for Personal Protection-Protective Footwear".

Specific hazards require specific types of protective footwear. Certain types of footwear can offer traction, crush protection, penetration protection, electrical protection, chemical resistance, heat and/or fire resistance, dryness, cushion, or ankle-protection. Further, certain activities may require a combination of these features.

Your foot is a remarkable piece of engineering which is composed of 26 bones, muscles, fatty tissue, nerves, tendons, skin and joints. The foot itself can absorb a tremendous amount of punishment without damage. But there are limits and it would be a shame to lose a foot, or part of a foot, because of failure to wear the prescribed protective footwear.

HAND PROTECTION

Your hand is composed of 20 muscles, 3 major nerves, 27 bones (14 of which are in your fingers) plus skin, fatty tissue, tendons, and joints. There are 15 muscles in your forearm which provide power to your hand. Your hand is your gateway to the world. It lets you do what you think. Its function is feeling and grasping.

Try to pick up something while holding your thumb still. It is very difficult. If the nerve to the small muscles of the thumb is severed, 80% of the total hand function is lost.

There are numerous types of hand protection (gloves) available -- each with a specific purpose. The most common are general purpose cotton work gloves which provide protection from minor skin abrasions and cold. However, there are many other types of gloves. Hands need protection from chemicals, abrasions, cuts and lacerations, temperature extremes, germs, radiation, impact, punctures, electricity, and other hazards in the workplace. Specific job requirements determine the type of hand protection needed. Proper hand protection must do more than protect your hand; it must allow you to accomplish your job assignment with efficiency as well as safety.

Wearing hand protection could prevent your hand and/or fingers from being severed, burned, crushed, punctured, lacerated, cut, or generally abused.

MISCELLANEOUS PERSONAL PROTECTION

PPE immediately brings to mind eye, head, hand, and foot protective equipment. However, there may be other types of protective equipment which are readily available and which have the capability of protecting employees from identified hazards in the workplace. Some of these items may not fall under a specific OSHA standard or may not be ANSI approved or disapproved, however, in the judgment of our PPE Program Administrator, they may be appropriate for use in our operations.

RESPIRATORY PROTECTION

Employees who, by nature of their work, are exposed to harmful aerosols, vapors, gases, contaminated air, or non-breathable air will be provided air purifying or air supplying respirators after training, medical evaluation, and fit testing per our Respiratory Protection Program. The one exception is dust masks worn solely for comfort and not for respiratory protection.

SUMMARY

The true beneficiary of PPE utilization is the user. The whole thrust of this Program is to protect our employees from injury. This is accomplished by, among other things, explaining the process of hazard assessment; the reasons for PPE use; and the necessity of using the PPE selected.

What possible justification could there be for maiming, losing, or even slightly injuring a body part because available (and required) PPE was not used? "I forgot"; "I was in a hurry"; "I misplaced my PPE"; "I felt silly wearing PPE"; or "I really didn't believe PPE was necessary" will not undo what could be a lifetime of regret.

ServiceBoss International, Inc.
Environmental, Health & Safety Program

CERTIFICATE OF WORKPLACE HAZARD ASSESSMENT

I certify, this date, that I have performed a hazard assessment of our job sites and our methods of operations.

This hazard assessment was accomplished to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE).

Identified hazards which cannot be eliminated through engineering controls or changes in procedures will be addressed by the use of selected PPE.

All affected employees will be informed of the required PPE for specific work locations or specific types of work to be performed and will receive initial training or retraining, if necessary, before being allowed to perform work requiring PPE.

If conditions or procedures change, a reassessment will be made.

Personal Protective Equipment
Program Administrator

(Date)

ServiceBoss International, Inc.

SCAFFOLD & LADDER

ServiceBoss International, Inc.

Safety Program

SECTION III

SCAFFOLD & LADDER

INDEX

TOPIC	PAGE
OVERVIEW	1
SCAFFOLD SAFETY	1
DEFINITIONS	1
GUIDELINES FOR SCAFFOLD USE	3
GUIDELINES FOR THE CONTROL OF ELECTRICAL HAZARDS	7
GUIDELINES FOR THE CONTROL OF FALL HAZARDS	7
SPECIAL PRECAUTIONS FOR THE PREVENTION OF FALLING	8
FALL PROTECTION DURING ERECTION & DISMANTLING OF SUPPORTED SCAFFOLDS	10
GUIDELINES FOR THE CONTROL OF FALLING OBJECTS	11
ACCESS	12
GENERAL VERSUS SPECIFIC SCAFFOLD SAFETY GUIDELINES	13
LADDERS.....	13
TRAINING	15

OSHA Standards:

Scaffold Standards:

29 CFR 1926.450 *Scope, Application and Definitions Applicable to this Subpart*

29 CFR 1926.451 *General Requirements*

29 CFR 1926.452 *Additional Requirements Applicable to Specific Types of Scaffolds*

29 CFR 1926.454 *Training Requirements (For Scaffold Safety)*

1926 Subpart L App A: *Scaffold Specifications*

1926 Subpart L App D: *List of Training Topics for Scaffold Erectors and Dismantlers*

1926 Subpart L App E: *Drawings and Illustrations*

Ladder Standards:

29 CFR 1926.1051 *General Requirements (Ladders)*

29 CFR 1926.1053 *Ladders*

29 CFR 1926.1060 *Training Requirements (Ladders)*

OVERVIEW

Scaffolds and ladders are everyday items on most construction sites and their use presents specific hazards -- the most common being electrical shock, falls and falling objects. This program addresses these hazards and provides safety rules for the use of this type of equipment.

Affected individuals must be aware of the specific hazards applicable to their work situation and the proper safety procedures for avoiding these hazards.

All scaffold and ladder applications require a knowledge of: equipment inspection, load capacities, ground conditions, effects of weather, fall protection, potential electrical hazards, and protection from falling objects. It is expected that all personnel understand how to perform work in a safe manner while on a scaffold or ladder, recognize unsafe work situations, and effectively deal with them. If you are aware of a ladder or scaffold hazard (or any safety hazard), immediately bring it to the attention of your immediate Supervisor or the competent person on the job site.

SCAFFOLD SAFETY

A scaffold, by definition, is any temporary elevated platform and its supporting structure used for supporting employees or materials or both. Because of the numerous types of scaffolds, the infinite possible combinations of uses, the various surface features on which the scaffold may rest, and the varying conditions in which scaffolds may be used, it would be impossible to detail what to do in every situation. The goal of any safety program - including scaffold safety - is to eliminate the possibility of harm to employees while they are performing their duties.

Only safety harnesses, not belts, will be used in fall protection.

Leading causes for scaffold accidents and injuries are plank slippage, being struck by falling objects, and the actual collapse of the support structure or planking.

DEFINITIONS

There are a number of terms and phrases which must be understood by all employees when dealing with scaffolds. Below are listed important definitions to aid in the understanding of this Program, however they are not all-inclusive. A complete list of definitions, including the many types of scaffolds and their individual components is found in 29 CFR 1926.450.

BODY HARNESS: a design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a personal fall arrest system.

COMPETENT PERSON: one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

EXPOSED POWER LINES: electrical power lines which are accessible to employees and which are not shielded from contact. Such lines do not include extension cords or power tool cords.

FAILURE: load refusal, breakage, or separation of component parts. Load refusal is the point where the ultimate strength is exceeded.

GUARDRAIL SYSTEM: a vertical barrier consisting of, but not limited to, top rails, mid rails, and posts erected to prevent employees from falling off a scaffold platform or walkway to lower levels.

LANDING: a platform at the end of a flight of stairs.

LIFELINE: a component consisting of a flexible line that connects to an anchorage at one end to hang vertically (vertical lifeline), or that connects to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

LOWER LEVELS: areas below the level where the employee is located and to which an employee can fall. Such areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, and equipment.

MAXIMUM INTENDED LOAD: the total load of all persons, equipment, tools, materials, transmitted loads, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.

OPEN SIDES AND ENDS: the edges of a platform that are more than 14 inches away horizontally from a sturdy, continuous, vertical surface (such as a building wall) or a sturdy, continuous, horizontal surface (such as a floor), or a point of access. Exception: For plastering and lathing operations, the horizontal threshold distance is 18 inches.

PERSONAL FALL ARREST SYSTEM: a system used to arrest an employee's fall. It consists of an anchorage, connectors, a body harness and may include a lanyard, deceleration device, lifeline, or combinations of these.

PLATFORM: a work surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks, fabricated decks, and fabricated platforms.

QUALIFIED PERSON: one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

RATED LOAD: the manufacturer's specified maximum load to be lifted by a hoist or to be applied to a scaffold or scaffold equipment.

SCAFFOLD: any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage) used for supporting employees or materials or both.

UNSTABLE OBJECTS: items whose strength, configuration, or lack of stability may allow them to become dislocated and shift and therefore may not properly support the loads imposed on them. Unstable objects do not constitute a safe base support for scaffolds, platforms, or employees. Examples include, but are not limited to, barrels, boxes, loose brick, and concrete blocks.

GUIDELINES FOR SCAFFOLD USE

ALL SCAFFOLDS:

Employees who work on any type of scaffold must follow the below listed guidelines:

- a. scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
- b. scaffolds and scaffold components will be inspected for visible defects by a competent person before each work shift and after any occurrence which could affect a scaffold's structural integrity.
- c. damaged or weakened parts will be immediately replaced.
- d. scaffolds shall be erected, moved, dismantled or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.
- e. work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and these employees are protected by a personal fall arrest system or wind screens.
- f. personnel may not work on scaffolds covered with snow, ice or other slippery material except to remove the material with extreme care.

- g. where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads shall be used.
- h. debris shall not be allowed to accumulate on platforms.
- i. make-shift devices on top of scaffold platforms shall not be used to increase the working level height of employees.
- j. guardrails should have smooth surfaces to prevent puncture, laceration, or snagging injuries.
- k. make-shift parts will not be used. A nail is not a substitute for a pin.

SUPPORTED SCAFFOLDS:

Employees who work on supported scaffolds must follow the below listed rules and guidelines. These guidelines cover most, but not all situations. The competent person will address unusual situations.

- a. Each platform unit on all working levels of a scaffold shall be fully planked or decked between the front uprights and the guardrail supports and each platform unit shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch wide (where feasible.)
- b. Supported scaffolds must have a height to base (including outrigger supports, if used) width ratio of no more than 4:1 unless restrained from tipping by guying, tying, bracing, or equivalent means. The competent person will direct the procedures for prevention of tipping.
- c. Supported scaffold poles, legs, posts, frames and uprights must rest on **base plates AND** mud sills or other adequate firm foundation.

Note: Base plates must always be used on supported scaffolds

- 1. Footings must be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
- 2. Unstable objects can not be used to support scaffolds or platform units.
- 3. Unstable objects shall not be used as working platforms.
- 4. Front-end loaders and similar pieces of equipment shall not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use.
- 5. Fork-lifts shall not be used to support scaffold platforms unless the entire platform is attached to the fork and the fork-lift is not moved horizontally while the platform is occupied.

- d. Supported scaffold poles, legs, posts, frames and uprights shall be plumb and braced to prevent swaying and displacement.
- e. Scaffolds shall not be moved horizontally while employees are on them unless they have been designed by a registered professional engineer specifically for such movement or, in the case of mobile scaffolds:
 1. the surface on which the scaffold is being moved is within 3 degrees of level and free of pits, holes, and obstructions.
 2. the height to base width ratio of the scaffold during movement is two to one or less.
 3. outrigger frames, when used, are installed on both sides of the scaffold.
 4. when power systems are used, the propelling force is applied directly to the wheels and does not produce a speed in excess of 1 foot per second.
 5. no employee is on any part of the scaffold which extends outward beyond the wheels, casters, or other supports.
 6. before the scaffold is moved, each employee on the scaffold must be made aware of the move.

SUSPENDED SCAFFOLDS:

Employees who work on suspended scaffolds must follow the below listed rules and guidelines. These guidelines cover most, but not all situations. The competent person will address unusual situations.

- a. All suspension scaffold devices shall rest on surfaces capable of supporting at least 4 times the load imposed on them by the scaffold operating at the rated load of the hoist (or at least 1.5 times the load imposed on them by the scaffold at the stall capacity of the hoist, whichever is greater).
- b. Direct connections on suspension scaffolds must be evaluated before use by a competent person who shall confirm that the supporting surfaces are capable of supporting the loads to be imposed.

- c. Counterweights shall be made of non-flowable material. Sand, gravel and similar materials that can be easily dislocated may not be used as counterweights.
 - 1. Only items specifically designed as counterweights shall be used as counterweights. Construction material shall not be used as counterweights.
 - 2. Counterweights shall not be removed from an outrigger beam until the scaffold is disassembled.
- d. The use of repaired wire rope as suspension rope is prohibited.
- e. Wire ropes shall not be joined together except through the use of eye splice thimbles and secured by eye splicing or equivalent means.
- f. Wire ropes shall be inspected for defects by a competent person prior to each work shift and after every occurrence which could affect a wire rope's integrity. Wire ropes will be **replaced** if any of the following conditions exist:
 - 1. any physical damage which impairs the function and strength of the rope.
 - 2. kinks that might impair the tracking or wrapping of rope around the drum(s) or sheave(s).
 - 3. six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay.
 - 4. abrasion, corrosion, scrubbing, flattening or peeling causing loss of more than one third of the original diameter of the outside wires.
 - 5. heat damage caused by a torch or any damage caused by contact with electrical wire.
 - 6. evidence that the secondary brake has been activated during an overspeed condition and has engaged the suspension rope.
- g. Gasoline-powered equipment and hoists shall not be used on suspension scaffolds.
- h. Gears and brakes of power-operated hoists used on suspension scaffolds shall be enclosed.
- i. Manually operated hoists shall require a positive crank force to descend.

GUIDELINES FOR THE CONTROL OF ELECTRICAL HAZARDS

To prevent the possibility of electrical shock, neither the scaffold nor any conductive material handled on the scaffold shall come closer to exposed and energized power lines as noted below:

INSULATED POWER LINES

<u>Voltage</u>	<u>Minimum Distance</u>	<u>Alternatives</u>
Less than 300 volts	3 feet	
300 volts to 50 kv	10 feet	
More than 50 kv	10 feet plus 0.4" for each 1 kv over 50 kv	2 X's the length of the line insulator, but never less than 10 feet

UNINSULATED POWER LINES

<u>Voltage</u>	<u>Minimum Distance</u>	<u>Alternatives</u>
Less than 50 kv	10 feet	
More than 50 kv	10 feet plus 0.4" for each 1 kv over 50 kv	2 X's the length of the line insulator, but never less than 10 feet

Scaffolds may be closer to power lines if it is necessary to accomplish the work, but only after the utility company or electrical system operator has been notified of the need to work closer, and the utility company or electrical system operator has deenergized or relocated the lines or installed protective coverings to prevent accidental contact with the lines.

When using 110 volt electrical power tools or lights, ground fault circuit breakers must be used. Electrical extension cords must be inspected for cuts or cracks in the insulation before use.

GUIDELINES FOR THE CONTROL OF FALL HAZARDS

Each employee working on a scaffold more than 10 feet above a lower level must be protected from falling to that lower level as noted below:

<u>SCAFFOLD TYPE</u>	<u>FALL PROTECTION REQUIREMENTS</u>
Boatswains' Chair	Personal Fall Arrest System
Catenary Scaffold	
Float Scaffold	
Needle Beam Scaffold	
Ladder Jack Scaffold	

<u>SCAFFOLD TYPE</u>	<u>FALL PROTECTION REQUIREMENTS</u>
Single-Point Adjustable Suspension Scaffold Two-Point Adjustable Suspension Scaffold	Personal Fall Arrest System and a Guardrail System
Crawling Board (Chicken Ladder)	Personal Fall Arrest System; *Guardrail System or a ¾" diameter grabline or equivalent handhold securely fastened beside each crawling board.
Self-Contained Adjustable Scaffold	*Guardrail System when the platform is supported by the frame structure; by both a Personal Fall Arrest System and a *Guardrail System when the platform is supported by ropes.
Walkway Located within a Scaffold	*Guardrail System installed within 9½" of and along at least one side of the Walkway.
Supported Scaffolds used while performing Overhand Bricklaying	Personal Fall Arrest System or a *Guardrail System (except at the side next to the wall being laid.)
All Other Scaffolds not specified above	Personal Fall Arrest System or a *Guardrail System

*Guardrail Systems must have a minimum 200 pound toprail capacity.

SPECIAL PRECAUTIONS FOR THE PREVENTION OF FALLING

PLANKING REQUIREMENTS:

Plank slippage causes falls and falls cause injuries. Below are requirements for platforms and/or planks used on scaffolds and walkways:

- a. each platform unit (e.g., scaffold plank, fabricated plank, fabricated deck, or fabricated platform) shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch wide.

1. Exceptions to the above:

when a wider space is necessary (for example, to fit around uprights when side brackets are used to extend the width of the platform). In this instance, the platform must be planked or decked as fully as possible and the remaining open space between the platform and the uprights shall not exceed 9½", or

when planking or decking is used solely for walkways or solely for use by personnel erecting or dismantling the scaffold. In these instances, only the planking the competent person establishes as necessary to provide safe working conditions is required.

b. Each scaffold platform and walkway shall be at least 18 inches wide.

1. Exceptions to the above:

each ladder jack scaffold, top plate bracket scaffold, roof bracket scaffold, and pump jack scaffold shall be at least 12 inches wide.

there is no minimum width for boatswain's chairs.

where working areas are so narrow that platforms and walkways cannot be at least 18 inches wide, the platforms and walkways shall be as wide as feasible. In these instances, personnel shall be protected from fall hazards by the use of guardrails and/or personal fall arrest systems regardless of the height.

c. The front edge of all platforms shall not be more than 14 inches from the face of the work unless guardrail systems are erected along the front edge and/or fall arrest systems are used.

1. Exceptions to the above:

for outrigger scaffolds, the maximum distance from the face of the work shall be 3 inches.

for plastering and latching operations, the maximum distance from the face of the work shall be 18 inches.

d. Each end of a platform, unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support by at least 6 inches and not more than:

1. twelve (12) inches for a platform 10 feet or less in length unless the platform is designed and installed so that the cantilevered* portion of the platform is able to support personnel and/or material without tipping, or has guardrails which block access to the cantilevered end.

2. eighteen (18) inches for a platform greater than 10 feet in length unless it is designed and installed so that the cantilevered* portion of the platform is able to support personnel without tipping or has guardrails which block access to the cantilevered end.

*NOTE: Cantilevered portion of the platform is the portion of the platform which extends beyond the support by 12 or 18 inches.

- e. On scaffolds where scaffold planks are abutted to create a long platform, each abutted end shall rest on a separate support surface. The use of common support members such as “T” sections to support abutting planks or hook on platforms designed to rest on common support is acceptable.
- f. Where platforms are overlapped to create a long platform, the overlap shall occur only over supports and shall not be less than 12 inches unless the platforms are nailed together or otherwise restrained to prevent movement.
- g. At points of a scaffold where the platform changes direction, such as turning a corner, any platform that rests on a bearer at an angle other than a right angle shall be laid first; platforms which rest at right angles over the same bearer shall be laid second on top of the first platform.
- h. With the exception that the edges may be marked for identification, wood platforms shall not be covered with opaque finishes. Platforms may be coated with wood preservatives, fire-retardant finishes, and slip-resistant finishes as long as the coatings allow the actual wood to be seen. This is so the wood platforms may be inspected for damage and/or deterioration.
- i. Scaffold components manufactured by different manufacturers can not be intermixed unless the components fit together without force and the scaffold’s structural integrity, as determined by a competent person, is maintained.
- j. Scaffold components made of dissimilar metals shall not be used together unless a competent person has determined that galvanic action will not reduce the strength of any component below acceptable levels.

FALL PROTECTION DURING ERECTION & DISMANTLING OF SUPPORTED SCAFFOLDS

Supported Scaffolds: The competent person must determine the feasibility and safety of providing fall protection for employees erecting and dismantling supported scaffolds.

Suspended Scaffolds: Fall protection for those erecting and dismantling suspended scaffolds is possible because the anchorage points used for supporting the scaffold would certainly support a fall protection system. Therefore, fall protection will be utilized for personnel erecting or dismantling supported scaffolds.

GUIDELINES FOR THE CONTROL OF FALLING OBJECTS

All personnel working on a scaffold must wear hard hats. Further protection from falling objects will be provided, if needed, by toeboards*, screens, or guardrail systems; or through the erection of debris nets, catch platforms, or canopy** structures that contain or deflect the falling objects.

Objects that are too heavy or massive to be prevented from falling by the above measures will be kept away from the edge of the scaffold and secured as necessary to prevent their falling.

Where there is a possibility of falling objects (tools, materials, or equipment), the below safeguards must be implemented:

- a. the area below the scaffold to which objects can fall shall be barricaded and employees shall not be permitted to enter the hazard area, **or**
- b. a toeboard will be erected along the edge of platforms more than 10 feet above lower levels for a distance sufficient to protect employees below.

When tools, material, or equipment are piled to a height higher than the top edge of the toeboard, the below listed safeguards must be implemented:

- a. paneling or screening extending from the toeboard or platform to the top of the guardrail shall be erected for a distance sufficient to protect employees below, **or**
- b. a guardrail system shall be installed with openings small enough to prevent passage of potential falling objects, **or**
- c. a canopy structure, debris net or catch platform strong enough to prevent passage of potential falling objects shall be erected over the employees below.

*NOTE: Toeboards must be capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or horizontal direction and be at least 3½" high from the top edge of the walking/working surface. Further, toeboards must be secured to the outermost edge of the platform and not have more than ¼" clearance above the walking/working surface. Toeboards must either be solid or have openings not over 1" in the greatest dimension.

**NOTE: Canopies used for falling object protection must be installed between the falling object hazard and the employees below.

ACCESS

Two feet -- 24 inches -- is the height at which some sort of access is required to reach a scaffold platform. When a scaffold platform is two (2) feet above or below the point of access (often the ground level), portable ladders, hook-on ladders, ramps, walkways, ladder stands, etc. must be used. Never use a crossbrace as a means of getting on or off a scaffold.

Hook-on and attachable ladders must:

- a. be positioned so they do not tip the scaffold.
- b. have the bottom rung within 24 inches of the supporting level.
- c. have rest platforms at least at 35-foot vertical intervals when used on supported scaffolds.
- d. be designed for use with the scaffold being used.
- e. have a minimum spacing between rungs of 16 $\frac{3}{4}$ inches and a minimum rung length of 11 $\frac{1}{2}$ inches.

Stairway type ladders have essentially the same requirements except that:

- a. the rest platforms must be at the 12 foot (maximum) vertical level.
- b. the minimum step width is 16 inches (mobile scaffold stairway-type ladders: 11 $\frac{1}{2}$ inches).
- c. slip-resistant treads are required on all steps and landings.

Stairtowers, if used, must have the bottom step within 24 inches of the supporting level and have

- a. a toprail and midrail (stairrail) on each side.
- b. a landing platform at least 18 inches by 18 inches at each level.
- c. a width of 18 inches between stairrails.
- d. resistant surfaces on treads and landings.

Employees must be able to safely get on and off a scaffold platform and, at 24 inches, you will need a specific method of access.

GENERAL VERSUS SPECIFIC SCAFFOLD SAFETY GUIDELINES

General safety guidelines apply to all situations. In all situations, employees must be aware of:

- a. potential electrical hazards, fall hazards, and falling object hazards and how to eliminate them.
- b. the proper use of scaffolds and the proper handling methods of materials on the scaffold being used.
- c. the maximum intended load and the load-carrying capacities of the scaffold being used and never exceeding these limits.

Within the broad categories of suspended and supported scaffolds, there are many specific types of scaffolds -- each with its own limitations and special characteristics. Each job site has its own unique ground composition on which a supported scaffold is erected, or unique attachment points for suspended scaffolds. The competent person on the job site will instruct affected employees on any unusual or unique items that must be known about a specific circumstance.

LADDERS

Ladder safety is no less important than scaffold safety. How easy it is to overlook ladder safety. After all, who hasn't used a ladder? All employees using ladders are required by OSHA standard to receive training and understand proper procedures for ladder use before using a ladder in a work situation. For employees who have been using ladders safely for years, consider this a refresher course.

American National Standards Institute (ANSI) and NIOSH approval labels should never be covered with paint or tape. Having ladders that are constructed to standard will prevent collapse and resultant falls.

Specific operational procedures for ladders directly relating to the elimination of fall hazards are listed below:

- a. a stairway or a ladder will be provided at all personnel points of access where there is a break in elevation of 19 inches or more.
- b. ladders will never be overloaded.
- c. ladder rungs, cleats, and steps must be parallel, level, and uniformly spaced when a ladder is in position for use.
- d. ladders will not be tied or fastened together unless they are so designed.

- e. portable ladders used for gaining access to an upper level will extend at least 3 feet above the upper landing surface or the ladder will be secured at its top.
- f. ladders must be free of oil, grease, or other slipping hazards.
- g. ladders must be used for the purpose for which they were designed.
- h. non-self supporting ladders will be used at an angle that the horizontal distance from the top support to the foot of the ladder is approximately $\frac{1}{4}$ of the working length of the ladder.
- i. ladders will only be used on stable and level surfaces unless secured to prevent displacement.
- j. ladders shall not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement.
- k. ladders placed in any location where they can be displaced by workplace activities or traffic will be secured to prevent accidental displacement, or a barricade will be used to keep the activities or traffic away from the ladder.
- l. the area around the top and bottom of the ladder shall be kept clear.
- m. ladders shall not be moved, shifted, or extended while occupied.
- n. the top step of a stepladder shall not be used as a step.
- o. portable ladders with structural defects will be immediately marked in a manner that readily identifies them as defective and removed from service until repaired.
- p. when ascending or descending a ladder, one must face the ladder.
- q. employees must use at least one hand to grasp the ladder when progressing up and/or down the ladder.
- r. employees are not to carry any object or load that could cause loss of balance and a resultant fall.

Fixed ladders where the length of climb is less than 24 feet but the top of the ladder is greater than 24 feet above the lower level must have cages, wells, ladder safety devices, or self-retracting lifelines.

Fixed ladders where the length of climb equals or exceeds 24 feet shall have at least one of the following:

- a. ladder safety devices;
- b. self-retracting lifelines and rest platforms not exceeding 150 feet;
- c. a cage or well, and multiple ladder sections not exceeding 50 feet in length. At the maximum interval of 50 feet, ladder sections will be offset on landing platforms.

TRAINING

Interactive training will be given to all employees who will be performing work on scaffolds by a competent person; it will focus on the hazards associated with the type(s) of scaffolding used on our job site, as well as the methods to minimize or eliminate those hazards.

For those employees who will be erecting, disassembling, moving, operating, repairing, inspecting, or maintaining our scaffolds, the competent person will provide additional training applicable to their job requirements.

Retraining will be provided should new types of scaffolding be introduced, standards change, or on-the-job performance indicate that a particular employee has not retained the required proficiency in scaffold safety.

Training will be given, as necessary, to all employees who will be performing work using ladders by a competent person. Issues addressed will include:

- a. the nature of fall hazards in the work area.
- b. the correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used.
- c. the proper construction, placement, care and handling of all ladders.
- d. the maximum intended load-carrying capacities of ladders used.
- e. the availability of the ladder standards which are contained within this program.

Retraining will be provided, as necessary. Observation of failure to follow established ladder safety procedures would be a cause for retraining.