



Construction Safety & Health Manual for Principal Builders LLC



Construction Safety & Health Manual

TABLE OF CONTENTS

- I. Principal Builders LLC Contractor Safety and Health Policy
- II. Contractor Safety Requirements
- III. Accountability and Responsibilities
 - A. General (or Prime) Contractor
 - B. All Contractors
- IV. Overview of Principal Builders LLC Contractor Safety Standards and Requirements
 - A. Purpose
 - B. Applicability
 - C. General Safety and Health Rules
 - D. Use of Personal Protective Equipment
 - E. Trenching and Excavation Safety
 - F. Confined Space Entry Program
 - G. Fall Protection
 - H. Dry Cutting and Dry Grinding of Masonry Materials Prohibited
 - I. Lockout/Tagout
 - J. General Electrical Safety
 - K. Use and Storage of Hazardous Materials and Chemicals
 - L. Contractor Vehicles on PVSC Property and Projects
 - M. Ladder Safety
 - N. Hand and Power Tools
 - O. Fire Prevention and Housekeeping
 - P. Traffic Safety in Construction Area
 - Q. Use of Scaffolds
 - R. Cranes and Rigging
 - S. Boom and Scissor Lifts
 - T. Welding, Cutting and Grinding



- U. First Aid and Medical
- V. Placement of Aboveground Storage Tanks (AST's)
- W. Asbestos and Lead Abatement Projects
- X. Employee/Supervisor Certification Form for Verifying Review by the Employee and the Supervisor of Principal Builders LLC Overview of Safety Standards and Requirements



I. PRINCIPAL BUILDERS LLC CONTRACTOR SAFETY AND HEALTH POLICY

Principal Builders LLC is committed to providing a safe, healthful and secure work environment for all persons directly involved in our construction activities. We are also committed to providing protection to the public from the hazards associated with on-site and off-site construction activities.

It is the intent of Principal Builders management to require all contractors to foster and promote the mission of an **Injury Free Workplace**. This calls for the elimination of unsafe acts, unsafe conditions, and the elimination of near miss incidents, which can be accomplished through:

- Safe work programs and practices by General Contractors and all their subcontractors.
- Personal commitment of everyone on the site to the success of this project. Ownership of the work product by the workers.
- Pursuant to this goal, all workers on this project have the following responsibilities:
 - To conduct their work in a safe manner, to immediately correct any unsafe act and/or condition pertaining to their work, to take prompt corrective action and to ensure that work activities proceed in a safe manner.

All contractors and subcontractor tiers are required to implement measures to create a universal awareness, which promotes safe practices at the work site, and strives towards the achievement of **Zero Incidents**.

Each Contractor that performs work on our projects shall prepare and submit their own project-specific Safety Plan. This plan shall be tailored to the specific work to be performed on the project by their work force and their subcontractor's work force. The Safety Plan shall be in conformance with the requirements and standards of all applicable governing regulatory agencies, as well as Principal Builders requirements.

New Employee Orientation - Every new or reassigned contractor employee shall be provided instruction in the general safety requirements of their job. The Principal Builders Overview of Safety Standards and Requirements shall also be reviewed with the employee. The contractor shall submit a signed copy of the Employee/Supervisor Certification Form for verifying review by the employee and the supervisor of Principal Builders safety standards and requirements.

Safety and loss prevention must be an integral part of each job. Full participation, cooperation and support are necessary and required to ensure the safety and health of all persons and property involved in the project.



II. CONTRACTOR SAFETY REQUIREMENTS

All construction activities shall be conducted in accordance with each contractor's Safety Plan. All such plans shall, at a minimum, conform to applicable laws, standards and regulations, and shall incorporate Principal Builders requirements.

Those contractors whose safety practices and guidelines exceed OSHA, other applicable law and regulations, and Principal Builders construction safety standards may abide by their more stringent requirements. However, the minimum federal or local regulations must always be complied with.

When a conflict exists between the standards listed in this manual, a contractor's safety program or OSHA regulations, the standard / regulation affording the greatest level of safety and protection for the worker shall take precedence.

The contractor is solely responsible for ensuring the safety of its employees, and is responsible for the safety of all of its subcontractors, agents or representatives.

The contractor shall include a job hazard analysis for any potentially high hazard activities as part of their safety plan.

These standards are not all-inclusive -other elements may be added, or may be conveyed individually to contractors to whom they may expressly apply. There are other essential elements that the contractor, by nature of the specific type of work being performed, must integrate within their own safety program.

The communication of the safety program elements will be achieved through new employee orientation, weekly toolbox talks, contractor safety meetings, contractor/owner safety meetings, sub-contractor safety management meetings, and the continuous evaluation of the worksite for safety enhancements.

Site safety signs, posters, barricades, danger tape, and employee incentive programs are important in order to enhance safety awareness and safety communication.

Each contractor and/or project shall establish a safety suggestion box so employees may anonymously submit suggestions for site safety improvements. The safety suggestions will be addressed in the scheduled safety meetings with action items listed within the meeting notes, by the contractor/subcontractor safety representative. The contractor shall submit a copy of all employees' safety suggestions and solutions by the contractor to Principal Builders on a monthly basis.



III. ACCOUNTABILITY AND RESPONSIBILITIES

It is imperative that site management and job supervisors exercise positive leadership in orienting and motivating their employees toward performing their jobs effectively, efficiently, and with a high regard for safety.

A. SUB CONTRACTOR

Sub Contractors shall be solely responsible for initiating, maintaining and supervising the safety and health of persons and property in connection with their work.

The provision or omission of safety and/or health services that may be provided by Principal Builders and/or their representatives to contractors shall not be deemed to transfer responsibility for safety to Principal Builders, or acceptance or assumption of any responsibility by Principal Builders, in whole or in part, for safety on the project site or in connection with the work.

The Sub Contractor will have the overall responsibility for ensuring that all contractors and their employees incorporate safety and health standards into all design and construction phases of the project, and for ensuring that this is reflected in all agreements and contracts, and by all contractors, subcontractors, supervisors, employees, vendors, visitors and anyone else connected with the project.

The Sub Contractor will also:

1. Keep Principal Builders and the Project Manager informed of events, potential safety risks, project safety statistics and progress pertaining to safety issues.
2. Develop site specific Safety Plans. The site specific Safety Plan must include: occupational safety, employee orientation and training, security, potential hazards, accident investigations, documentation for site audits, equipment inspections, disciplinary programs, and emergency contingency plans.
3. Confirm contractor's safety education and orientation requirements are consistently met.
4. Document weekly safety briefings for construction personnel.
5. Conduct all-hands safety meetings once per month, to include all sub tier contractor employees. Document the meeting subject, date and names of attendees by contractor and subcontractor. Submit documentation of the all-hands safety meeting to the construction manager. (Monthly Report)
6. Conduct weekly on-site safety inspections including a review of safety training, hazard correction and accident records. Inspection findings and corrections shall be furnished to Principal Builders upon its request.
7. Review and timely abate the results of safety inspections to include recommendations made for correction of hazards and prevention of accidents, and follow-up measures taken to ensure compliance.



8. Monitor and document compliance by contractors with mandatory safety and health laws, regulations, standards and codes.



9. Maintain records of all accidents experienced by contractors and subcontractors in assigned project area of responsibility in accordance with the OSHA requirements. Copies of records shall be forwarded to Principal Builders.
10. Provide a monthly report that shall include the following information:
 - A summary of all safety inspection reports and documentation that confirm that all safety deficiencies have been corrected.
 - Documentation that “Toolbox Talks” safety meetings have been conducted with all workers, including all subcontractors, at least weekly. Copies of all sign-in sheets, curriculum and any handouts shall be provided.
 - Copies of all employees’ safety suggestions and solutions by the contractor.
11. In conjunction with engineering and scheduling personnel, develop and implement specific safety and health procedures and effective safe work practices.
12. Provide protection of the public on or adjacent to construction sites as recommended by the American National Standards Institute (ANSI A10.34).
13. The sub-contractor shall provide a competent safety representative that must be on the project site at all times. The competent safety representative must hold (or furnish suitable proof of course completion and application for) a valid 10 Hour OSHA Construction card prior to the performance of any work under the contract. The contractor shall also furnish personnel meeting the requirements of “competent person” as defined by OSHA for all applicable aspects of the work.
14. Any worksite with non-English speaking workers shall have a person(s) fluent in the language(s) spoken and English to translate as needed, on site at all times when work is being performed.
15. The Sub-Contractor’s Safety Program should consist of:
 - a) Establishing a firm and positive accident prevention policy that includes: a management statement, the supplying and requiring the use of safety equipment like hard hats, ladders, first aid materials, and safety devices on equipment.
 - b) Ensuring that capable, responsible supervisors and the on site competent safety representative make regular inspections of all excavations, forms, scaffolds, stairs, ladders, structures, machinery, and equipment at frequent intervals; take immediate corrective measures to eliminate hazards directly under the control of the employer, or report violations of OSHA regulations and unsafe practices to the responsible employer.
 - c) Assurance that the site supervisors assume responsibility for accidents, and complete a written report for each reported accident and that each report suggest a feasible means of avoiding future accidents of a similar nature.
 - d) Monthly, or more frequent, meetings of all supervisors held under the direction of the superintendent for a discussion of safety concerns and accidents that have occurred. Have something specific ready for discussion, such as safety regulations, or any changes in equipment and methods that are to be adopted for safety reasons.
 - a) Display safety posters and warning signs. (Each contractor and/or subs must post at their work location a copy of OSHA’s poster informing employees of their rights)



and responsibilities as defined within the OSHA regulations).



- b) Consider the advisability of establishing various forms of safety competition, including suitable rewards or recognition to individuals and crews with good records.
 - c) Require supervisors to give individual safety instructions and orders, as needed, to new workers and those found to be working in an unsafe manner.
 - d) Ensure the job site supervisors conduct "toolbox" or "tail-gate" safety meetings with their crews once a week on the job, to emphasize some particular safety concerns that require special attention.
 - e) Encourage safety suggestions from all workers and, if the suggestion cannot be followed promptly, explain why to the worker. Give each worker a copy of important safety rules that they are expected to follow.
 - f) Arrange for frequent and regular field safety inspections.
16. The sub contractor shall respond in writing to Principal Builders as to the corrective action(s) for all non-compliance safety observations reported by Principal Builders Safety within five (5) Business days.
17. The sub contractor and subcontractors will be expected to immediately abate imminent danger safety hazards. (For example: excavation safety, confined space entry, etc.)

B. ALL SUB CONTRACTORS SHALL:

- 1. As a condition of their contract, assume responsibility for the safety and health of their employees and require the same of subcontractors and their employees, and other persons under the direct or indirect control of the contractor on the work site.
- 2. Assign a competent safety representative that must be on the project site at all times. The competent safety representative must hold (or furnish suitable proof of course completion and application for) a valid 10 Hour OSHA Construction card prior to the performance of any work under the contract. The contractor shall also furnish personnel meeting the requirements of "competent person" as defined by OSHA for all applicable aspects of the work.
- 3. **Immediately report any accidents, significant illnesses and injuries to Principal Builders at (857) 345-9595.** Investigate accidents and near miss incidents to determine root cause and develop/implement corrective actions to prevent reoccurrence. Accident investigation reports are to be completed and turned into the Principal Builders within 12 hours of the occurrence.
- 4. Comply with all applicable OSHA and Massachusetts laws, regulations, ordinances, conditions of contract, rules or orders of any public authority having jurisdiction relating to safety of persons or property.
- 5. Ensure that all employees, subcontractors and their employees are briefed on all of the applicable safety regulations and requirements for the work to be performed.



Sub-Contractors shall, in accordance with law, adopt procedures providing that any employee who disregards these rules or other applicable safety and health regulations shall be subject to appropriate disciplinary action or discharge.

6. Have their safety representative participate in the weekly safety walk-through meetings and progress meetings.
7. Ensure that: a) Prior to the performance of any work, each employee involved in the construction knows and understands each of the safety and security rules that apply to the job site in which he/she is performing for the project. b) **Personal protective equipment (inclusive of mandatory ANSI approved hard hat with appropriate foot wear) shall be used on site at all times, worn properly, and maintained in proper condition.** Appropriate footwear includes general construction shoes with ankle high support, no tennis shoes and/or leather sole shoes on site. c) Employees shall not engage in practical jokes and/or horseplay. d) An employee is not to undertake any work that he or she is not properly qualified, trained or equipped to do. In this regard, each employee shall be required to attend safety training or (toolbox/tail-gate) meetings weekly and sign an attendance sheet. e) All site personnel shall be made aware there is a "Zero Tolerance" for the use of intoxicating substances or illegal drugs on the site. Employees reporting for work while under the influence of intoxicating or illegal drugs will not be allowed to assume their duties. Employees reporting for work while under the influence of prescription or over the counter medications that impair their ability to work safely will also not be allowed to assume their duties.
8. Each contractor is to provide training and documentation to site management that their employees have been provided with information and training on the Hazard Communication Standard and site hazardous material storage and use conditions. In addition, each contractor is responsible for making provisions to provide copies of Material Safety Data Sheets (MSDS), and provide information on measures that need to be taken for personnel protection to all affected employees and workers within the vicinity of the hazardous substance.
9. Contractors are responsible for daily cleanup of working areas and the removal of trash and construction debris.
10. Each employee must always know where he or she is in relation to work in progress and avoid hazardous situations around equipment or construction. Employees must advise supervisory personnel of their work location. They should not work alone in an isolated area until arrangements have been made for periodic contact with another employee or supervision.
11. Each contractor is to provide training and documentation to site management that their employees have been provided with information and training on the site Fire Prevention Plan.



IV. OVERVIEW OF PRINCIPAL BUILDERS CONTRACTOR SAFETY STANDARDS AND REQUIREMENTS

A. PURPOSE

The purpose of this Section is to assist all contractors and subcontractors in establishing basic safety and health rules for this Project. Strict enforcement of and compliance with Federal and Massachusetts and Health rules and manufacturers' guidelines will aid in keeping personal injuries, occupational illnesses, and equipment and property damage to a minimum.

B. APPLICABILITY

The rules listed below apply to all onsite contractors, subcontractors and vendors on site for these contractors, including employees with supervisory and non-supervisory assignments. Principal Builders and their subcontractors are to promote accident prevention through indoctrination, safety and health training and on-the-job application, and shall use this **Overview of Safety Standards and Requirements**.

All subcontractors on the project shall provide their new employees New Hire Orientation to better understand the Overview of Safety Standards and Requirements.

As a minimum requirement, superintendents, supervisors, safety representatives and all employees must learn and abide by the general rules plus the safety and health rules that are applicable to their particular trade, task or occupation. These rules should be incorporated into pre-work indoctrination.

Individual trade safety and health rules apply not only to supervisors and to the workers, but also to helpers, assistants, apprentices, and to anyone else who might be in the work area. Supervisors shall ensure that new workers or visitors are made aware of and abide by the safety and health rules that are in effect.

C. GENERAL SAFETY AND HEALTH RULES

1. All persons shall follow this Overview of Safety Standards and Requirements and all safety rules and regulations of their employer, and local, state and federal requirements.
2. Failure to abide by the Overview of Safety Standards and Requirements or any applicable rules and/or regulations may result in removal of personnel and the sub - contractor from the Principal Builders project.
3. Immediately report any unsafe conditions, accidents, injuries or illness to your supervisor or superintendent. **Also immediately report any accidents, significant illnesses and injuries to Principal Builders @ 857-345-9595**
4. If employees are unsure of the safe method to do your job, STOP and ask your supervisor. Ignorance is no excuse for a safety violation.



5. No one shall be knowingly permitted to work while the employee's ability or alertness is impaired by fatigue, illness, and prescription or over the counter drugs or other substances. Employees who are suspected of being under the influence of illegal or intoxicating substances, impaired by fatigue or an illness, shall be prohibited from working.
6. Principal Builders projects have a "Zero Tolerance" for the use of illegal drugs and alcohol on the job site.
7. Horseplay, scuffling, fighting and other acts that tend to have an adverse influence on the safety or well being of the employees are prohibited.
8. All work shall be well planned and supervised to prevent injuries in the handling of materials and in working together with equipment.
9. Keep your work area clean, free of debris, electrical cords and other hazards.
10. Immediately clean up spilled liquids. If hazardous materials or chemicals are spilled the appropriate protective measures must be taken and reported to Principal Builders
11. Always notify all other individuals in your area who might be endangered by the work you are doing.
12. Do not operate equipment that you are not familiar with. Do not attempt to use such equipment until you are fully trained and authorized.
13. Never bring firearms, weapons, illegal drugs or alcoholic beverages on the project site.
14. Lockout and Tag-out system identifies equipment that is NOT to be operated, energized or used. All lockout and tag-out notices and procedures must be observed and obeyed. All lockout and tag-out operations/applications must be coordinated with the appropriate Principal Builders personnel.
15. "Danger" taped areas or areas enclosed with barricades, signs and fencing (or protective barriers) are considered danger zones and shall be respected as such. Admittance to or passage through such areas is prohibited without permission except to those employees working within the barricaded area.
16. When lifting heavy objects, mechanical means should be used, otherwise, buddy-up with a partner and share the load. When manually lifting, the large muscles of the leg instead of the smaller muscles of the back shall be used.
17. Do not block exits, fire doors, aisles, fire extinguishers, first aid kits, emergency equipment, electrical panels, or traffic lanes.
18. Do not leave tools, materials, or other objects on the floor that might cause others to trip and fall.
19. Do not run on the job site or in the shop, yard or office area.
20. Do not distract others while working. If conversation is necessary, make sure eye



contact is made prior to communicating.

21. Employees shall not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that may have limited ventilation, or other hazards unless it has been determined that it is safe to enter and is being properly ventilated. **Established permit required confined space entry requirements must be followed.**
22. Employees shall ensure that all protective guards and other protective devices are in proper place and adjusted when operating equipment. Report deficiencies promptly to the foreman or superintendent.
23. Materials or other objects shall not be thrown from buildings or structures unless and until proper precautions and barricading has been erected to protect people and property from injury and damage from the falling objects.
24. Employees shall cleanse thoroughly after handling hazardous substances, and follow special instructions from authorized sources.
25. Gasoline or other flammable liquids shall not be used for cleaning purposes or improperly stored on the jobsite.
26. A hot work permit is mandatory for all burning, welding, or other source of ignition for all PVSC projects.
27. Any damage to scaffolds, false work, or other supporting structures shall be immediately reported to the supervisor and repaired before use.
28. No driving or operating of equipment while talking on the radio, cell phone and or texting.
29. No talking or texting on the cell phone walking around or operating equipment in the construction site.

D. USE OF PERSONAL PROTECTIVE EQUIPMENT

1. Use the correct PPE for each job assignment. If you don't know or don't have necessary/proper equipment ask your supervisor for assistance.
2. PPE shall be maintained in good condition and cleaned regularly.
3. PPE shall be stored properly when not in use to protect it from damage.
4. Damaged or broken PPE must be returned to your foreman for replacement.
5. Hard hats must be worn on job sites at all times.
6. Appropriate eye protection shall be worn when indicated by the nature of the job, including those jobs for which eye protection may be recommended by an equipment and/or material manufacturer, material safety data sheet, etc.
7. Face shields with safety goggles are required when grinding or working with hazardous chemicals, along with all other appropriate PPE required for work with the



specific hazardous chemical.



8. Employees must wear safety work shoes in the yard and on the job site. The shoes must have complete leather uppers and skid resistant soles and be in good condition. Steel toe or equivalent protection is required.
9. Athletic style shoes, tennis shoes, open toe shoes, sandals, plastic or vinyl shoes or shoes with decorative metal accessories are not to be worn on construction jobsites.
10. Hearing protection must be worn when working with loud equipment such as cut off saws, chain saws, air hammers or grinders.
11. Be sure the protective clothing you wear will not hamper or restrict freedom of movement due to improper fit.
12. Long pants of heavy-duty material must be worn. No shorts or sweat pants are allowed.
13. Do not wear loose, torn or frayed clothing, dangling ties, finger rings, dangling earrings, jewelry items, or long hair unless contained in a hair net, while operating any machine, which could cause entanglement.
14. If required, wear NIOSH-approved respirators when applying adhesives, paint, welding, grinding or working with chemicals. Read the MSDS to find out which type of respirator is required. Facial hair may not be permitted in certain circumstances. (The contractor and subcontractor supervisors shall manage their own programs.)

E. TRENCHING AND EXCAVATION SAFETY

1. Compliance with OSHA's Excavation Safety Requirements as defined in 1926.650 Excavations is a must on all projects for PVSC. Failure to comply with the required excavation requirements may result in stopping the contractor's work and/or termination of the contract.
2. Contractors planning to excavate as part of their project shall provide to Principal Builders prior to the start of the excavation job the name of their assigned and on site Competent Person working the project. (If the competent person changes, Principal Builders shall be informed immediately.) This individual shall have authority (as defined by OSHA) for all work performed during the excavation - including the ability to stop the work.
3. All excavations and trenches 5 feet deep (or in unstable soil at lesser depths) or greater must be properly shored, sloped, or benched to protect workers from the hazards of moving earth. Sub-Contractors must furnish the appropriate tabulated data for the protective system being used upon request.
4. All excavation work must be performed to avoid underground utilities and to avoid damaging lines pipe.
5. Do not work under loads handled by lifting or digging equipment.
6. Ladders shall be provided and used for access to trenches and excavations 4 feet deep or greater.



7. Keep all spoils at least 2 feet from the edge of the excavation, regardless of the depth.



8. Trenches shall be properly barricaded, protected and posted to warn and prevent someone from falling into the excavation.
9. The competent person on the jobsite must inspect all trenches and excavations daily, before work, to look for signs of shifting earth. Employees are not to enter the trench unless it has been verified to be safe by the competent person.
10. Appropriate traffic control measures may also be required for excavations dug in roadways or sidewalks. Protective measures shall comply with the Massachusetts DOT's requirements.

F. CONFINED SPACE ENTRY PROGRAM

OSHA Confined Space requirements and procedures outlined under 1910.146 must be followed and all entries shall include continuous atmospheric monitoring of the space.

G. FALL PROTECTION

1. Fall protection, such as standard railings or a safety harness and lanyard, shall be used at all times, when working **6 feet or more above the level below** in accordance with OSHA.
2. Floor and wall openings, unfinished balconies, elevator shafts and similar areas must be properly protected and/or covered to prevent someone from falling into the structure.
3. Do not cut or disassemble existing railing systems unless specifically required by the project design documents. Railing systems removed shall be replaced with an equally protective system. Removed rails must be immediately replaced with a protective barrier to ensure no one can fall into the existing opening. Always seek permission from the respective Principal Builders operation supervisors and Principal Builders project manager if railings are required to be removed for any reason – even for a short time. Always replace these items when finished with your task.
4. All safety harnesses shall be the full body type with a shock-absorbing lanyard attached to a substantial anchorage capable of supporting twice the maximum load. Lanyards shall be attached at the wearer's upper back. Body belts are not to be worn as fall protection.
5. Read and obey all manufacturer's instructions relating to your fall arrest system (safety harness and lanyard).
6. Inspect all components of your harness and lanyard prior to each use and after a fall. Defective equipment is not to be used. Lanyards must be destroyed after a fall and never reused.
7. Safety harnesses and lanyards should limit free fall distance to less than 6 feet and prevent contact with any level or objects below you.
8. Never use any part of a fall arrest system, such as a harness or lanyard, to hoist



materials or for any other purpose.



9. Safety harnesses and shock absorbing lanyards are required to be worn at all times while in boom lifts.

H. DRY CUTTING AND DRY GRINDING OF MASONRY MATERIALS PROHIBITED

Dry cutting and dry grinding of masonry materials is prohibited under Massachusetts State Law and shall not be performed except under the limited circumstances

I. LOCKOUT/TAGOUT (LOTO)

1. All machinery and electrical equipment shall be locked out and tagged prior to repair, cleaning, or adjustment.
2. All LOTO operations/applications must be coordinated with the appropriate Principal Builders Staff.
3. Use your own lock and key. No one else should have a key for your lock. Destroy all duplicate keys.
4. Maintain control of your key at all times to prevent unauthorized use.
5. Never remove another employee's lock or energize tagged equipment.
6. If multiple employees are working on the same equipment, each employee shall install their own lock.
7. Notify all affected employees that a lock-out/tag-out is required and the reasons for it.
8. If the equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).
9. Operate the switch, valve or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, etc.) is disconnected or isolated from the equipment.
10. Stored energy, such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas or water pressure, etc. must also be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
11. Lock-out all energy isolation devices with an individual lock.
12. After ensuring that no employees are exposed and as a check of having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. **Caution: Return operating controls to neutral position after the test.**
13. The equipment is now locked-out. Install red lock-out tag on operating controls.
14. After repair is complete and the equipment is ready for testing or normal operation, check the equipment to see that all cover plates and safety devices have been reinstalled.



15. When the equipment is clear, remove all locks and tags. The energy isolating devices may be operated to restore energy to the equipment.

J. GENERAL ELECTRICAL SAFETY

1. Only trained, qualified and authorized employees are allowed to make electrical repairs or work on electrical equipment or installations.
2. All electrical equipment and systems shall be treated as energized until tested or otherwise proven to be de-energized. Always check your tester on a known circuit to make sure it is working. Assured equipment ground conductor programs shall be utilized for all temporary electrical installations.
3. All energized equipment and installations will be de-energized prior to the commencement of any work. If the equipment or installation must be energized for test or other purposes, special precautions will be taken to protect against the hazards of electric shock.
4. All equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy-isolating device bearing a lock.
5. Safety grounds shall always be used where there is a danger of shock from back feeding or other hazards.
6. Polyester clothing or other flammable types of clothing shall not be worn near electrical circuits. Cotton clothing is much less likely to ignite from arc blast. Employees working on live circuits shall be provided Nomex or equivalent fire resistant clothing.
7. Suitable eye protection must be worn at all times while working on electrical equipment.
8. Always exercise caution when energizing electrical equipment or installations. Take steps to protect yourself and other employees from arc blast and exploding equipment in the event of a fault.
9. All power tools will be grounded or double insulated. Tools with defective cords or wiring shall not be used.
10. Metal jewelry should not be worn around energized circuits.
11. Extension and temporary power cords must be heavy duty and grounded. Frayed or defective cords shall not be used.
12. Suitable temporary barriers or barricades shall be installed when access to opened enclosures containing exposed energized equipment is not under the control of an authorized person.



13. Electrical installations must be protected from accidental contact by enclosures or tight fitting covers.
14. GFCI's are required on all power outlets.
15. Circuits shall not be overloaded with equipment or extension cords.
16. Metal measuring tapes, fish tapes, ropes or other metal devices are prohibited where they may contact energized parts of equipment or circuits.

K. USE AND STORAGE OF HAZARDOUS MATERIALS AND CHEMICALS

1. Contractors using hazardous material on Principal Builders property must provide the Department of Security and Safety a copy of the respective MSDS prior to use of the product. In turn, the PVSC Department of Security and Safety will provide the contractor MSDS as requested.
2. Read all warning labels and Material Safety Data Sheets (MSDS) before using any chemicals. MSDS contain personal protective equipment and safety information and are available from your foreman.
3. Hazardous materials shall be handled in accordance with the MSDS and label. If protective equipment is required, use it.
4. Eye and/or face protection must be worn when working with hazardous materials or chemicals.
5. Mixing of chemicals is prohibited at all times unless required by the label. Before you mix - review all MSDS.
6. Always wash your hands thoroughly after handling chemicals and before eating or smoking, even if you were wearing protective gloves.
7. Never use solvents for hand cleaning. Use the non-toxic hand cleaners provided.
8. Store all hazardous materials properly in suitable containers that are properly labeled.
9. Use chemicals only in well-ventilated areas.
10. Chemical or hazardous material spills – **if a spill should occur notify Principal Builders immediately @ 857-345-9595 and inform them of the spill, type of chemical, location, and quantity of the spill and whether there are any injuries.** If the chemical is hazardous to health, immediately protect from others entering the area. If the chemical is spreading, protect the immediate area to prevent the chemical from reaching a storm drain or spilling into the water or wastewater system.
11. When using secondary containers, ensure that they are labeled as to their contents and hazards.
12. When working with asbestos, approved asbestos requirements shall be followed.



13. Do not disturb any asbestos. If you do disturb any asbestos, STOP work and tell your supervisor and then report to the Principal Builders Project Manager. If you are not sure, STOP and ask.
14. Do not cut or weld stainless steel or galvanized metal without respiratory protection. These items create toxic fumes. (Remember, hot work permits are required when cutting, grinding, welding, etc.)
15. Work with lead, asbestos, cadmium, TENORM and other toxic compounds requires special precautions. Do not attempt to perform this work without appropriate special equipment and training.

L. SUB CONTRACTOR VEHICLES ON PRINCIPAL BUILDERS PROPERTY AND PROJECTS

1. All vehicles and equipment on a Principal Builders jobsite shall comply with the appropriate state license requirements and contain documented proof of compliance. (Farm vehicles or unlicensed vehicles and equipment are not authorized for use on Principal Builders property.) Vehicles and equipment such as cranes, forklifts, etc., shall also maintain a current and valid inspection documentation.
2. Only authorized and properly licensed employees are to be permitted to operate contractor vehicles and equipment on Principal Builders sites.
3. Drive defensively and obey all traffic laws, highway and jobsite vehicle restrictions. Vehicles shall not exceed 15 mph while on Principal Builders property.
4. All occupants shall properly wear a seat belt at all times the vehicle is in motion.
5. Report all accidents immediately to your supervisor.
6. Do not permit employees to ride in the back of pickup trucks or equipment.
7. Do not jump from the cab or bed of company vehicles. Always use the stairs or a ladder.
8. Inspect your vehicle and report and correct any defects or operating problems to your supervisor so that repairs can be made.
9. No smoking while refueling.
10. All vehicles and equipment shall be properly parked in the designated locations for contract workers.
11. All vehicles working within construction areas shall be equipped with the appropriate backup alarm. Backup alarms may also be required on vehicles and equipment in areas with heavy pedestrian traffic.
12. All drivers shall be observant of the surroundings on the Plant.
13. Contractor and subcontractor vehicles and equipment shall not be left running or idling when not in use.



14. Only authorized vehicles are to be left on Principal Builders property overnight.



15. Aboveground storage tanks (AST's) are not permitted on Principal Builders property without prior approval from Principal Builders
16. All vehicles entering or operating on Principal Builders property are subject to inspection by designated Principal Builders personnel.

M. LADDER SAFETY

1. Inspect the ladder before using it. If it is broken, throw it out. Never repair a broken ladder, get a new one. Keep portable stairways, ladders and step stools in good condition and use them only in a safe manner.
2. Use the proper ladder for the job. Do not use "A" frame ladders as straight ladders. Make sure the ladder is tall enough to reach the work area. Do not use metal ladders for electrical work.
3. Do not place ladders in passageways, doorways, or any location where they might be hit or jarred, unless protected by barricades or guards.
4. Ladders should only be placed on hard level surfaces. Make sure the ladder feet are not placed on sandy, slippery, or sloping surfaces. Clean or sweep the area where the ladder feet will be and make sure the rubber feet are in good shape.
5. Ladder rungs and steps must be kept free of grease, oil, mud, or other slippery substances.
6. Arrange your work so you are able to face the ladder and use both hands while climbing. Do not carry tools or equipment while climbing a ladder. Climb the ladder, and then hoist the tools or equipment with a line or a hoisting device.
7. Avoid temporary ladders. Always use a commercially made, construction grade ladder of the proper length for the work being performed.
8. Secure portable ladders in place and at a pitch so the leveling indicator is in alignment or the distance from the wall to the base of the ladder is at 1 foot for every 4 feet height.
9. Straight ladders shall be tied off at the top and bottom of the ladder to prevent slipping.
10. Be aware of objects below you. Move or cover sharp objects in case you fall. Cap or bend all rebar.
11. Do not stand on or work from the 2nd rung from the top or above. Also do not reach too far from the ladder. Keep your belt buckle between the side rails.
12. Extension ladders shall extend at least 36 inches above the level being accessed.
13. On all ladders, do not step on cross bracing that is not intended to be used for climbing.

N. HAND AND POWER TOOLS

1. Proper eye protection must be worn when using hand and power tools.



2. Know your hand and power tool applications and limitations. Always use the proper tool for the job.
3. Inspect cords and tools prior to use. Do not use tools that are faulty in any way. Exchange them for safe tools immediately.
4. Power tools must be grounded or double insulated. All power tools are to be plugged into a grounded GFCI outlet.
5. Do not use power tools in damp, wet or explosive atmospheres.
6. Do not lift, lower or carry portable electrical tools by the power cord.
7. Keep all safety guards in place and in proper working order.
8. Keep tools in their proper storage place when not in use. Do not leave tools where they might present a tripping hazard, fall on somebody or be stolen. Do not carry sharp edged tools in your pockets.
9. Use clamps or vises to secure work pieces. Never use your hand as a work rest.
10. Do not force hand power tools. Apply only enough pressure to keep the unit operating smoothly.
11. Return all tools and other equipment to their proper place after use.
12. Unplug all power tools before changing bits and/or grinding disks.
13. Never leave chuck keys in the tool during operation.
14. Do not use a screwdriver as a chisel.
15. Before using sledges, axes or hammers make sure the handles are securely fastened with a wedge made of sound material.
16. Do not use a handle extension on any wrench.
17. Files should be equipped with handles and should not be used as a punch or pry.

O. FIRE PREVENTION AND HOUSEKEEPING

1. Always take precautions to prevent fires which may be started, particularly from oily waste, rags, gasoline, flammable liquids, acetylene torches, improperly installed electrical equipment and trash.
2. Hot work permits must be obtained **before** any torch cutting, grinding, welding or burning activities. Combustible gas monitoring with LEL alarm capability shall be conducted prior to and continuously during all hot work activities. No hot work will be permitted near grass areas when the humidity level is less than 30%. A sample hot work permit is attached.
3. Fire watches shall be maintained a minimum of 30 minutes after the activity stops for



all hot work permit projects.



4. All flammable liquids must be stored in designated areas at all times. Refueling is to be done only at designated areas.
5. Fire suppression equipment is to be inspected on a regular basis. All discharged, damaged or missing equipment is to be immediately reported to a supervisor for replacement. Tampering with fire equipment is prohibited.
6. If the project requires working on a fire alarm, sprinkler system or other automated system, you are required to coordinate the work with Principal Builders staff to make proper internal arrangements and notifications.
7. Access to fire extinguishers must be kept clear at all times. Make note of the location of firefighting equipment in your work area.
8. Never use gasoline or flammable solvents for cleaning purposes.
9. Smoking is prohibited inside all Principal Builders facilities. Smoking is allowed outdoors only in designated areas.
10. In case of fire, employees shall consider the safety of themselves and other individuals before saving property. Immediately report the incident to the appropriate authorities and stand by to assist emergency personnel. Principal Builders has established emergency procedures for each facility. Upon assignment of your contract, specific guidance and direction will be provided during the pre-construction meeting.
11. Keep your work areas free of debris. Remove useless material from the work area as fast as required to help reduce tripping hazards.
12. Maintain awareness of potential hazards when walking about the job site.
13. Keep tools, materials and equipment out of walkways and stairways at all times.
14. Sharp wires or protruding nails must be kept bent.
15. Place tools and equipment so they will not slide off the roof or work area.
16. Tie material down at day's end so the wind will not blow it off the roof or other elevated work area.

P. TRAFFIC SAFETY IN CONSTRUCTION AREAS

1. *All employees exposed to traffic hazards (construction equipment included) are required to wear a high visibility safety vest or other appropriate high visibility reflectorized garments meeting ANSI requirements (shirts, vests, jackets) at all times.*
2. *When possible, construction vehicles are to be placed between the employees and traffic to prevent vehicles from entering the work area and hitting members of the crew.*
3. *All traffic controls will be established in accordance with the Massachusetts Department of Transportation (MassDOT) requirements and the USDOT Manual of Uniform Traffic Controls for Construction and Maintenance Work Zones.*



4. *Traffic controls are to be properly maintained throughout the workday. Signs and*



cones must be kept upright, visible and in their proper position at all times.

Q. USE OF SCAFFOLDS

1. Scaffolds are to be erected, dismantled, altered or repaired by the scaffold contractor or designated employees only.
2. Inspect scaffolds prior to use and report any damage immediately to your foreman. Do not use damaged or makeshift scaffolds.
3. You are not permitted to ride on rolling scaffolds being moved.
4. At least 2 people are required to move rolling towers. Secure or remove all tools and materials before moving.
5. Always use guard railings on all scaffolds regardless of height.
6. Use only high quality planking on scaffolds and be sure the planks are secure to prevent shifting.
7. Always apply caster brakes and use outriggers when scaffolds are stationary.
8. Do not throw material or debris from scaffolds unless the area below is properly barricaded to protect other workers and materials and equipment.
9. Do not use planks or guard rails as a temporary means of obtaining greater height.
10. Be aware of the objects below you; move or cover sharp objects in case you fall. Cap or bend all rebar.

R. CRANES AND RIGGING

1. No employee is permitted to ride on loads, hooks, or slings of any crane, hoist or derrick.
2. Only properly trained and authorized employees are allowed to operate cranes.
3. Do not work or stand under any suspended load. Crane operators shall avoid swinging loads over people.
4. Always know the weight of the load and the forces applied to the slings and rigging.
5. Always use tag lines on loads.
6. Proper communication must be maintained with the crane operator at all times.
7. Inspect all slings and chains prior to use. Do not use defective slings, chains, or rigging.



S. BOOM AND SCISSOR LIFTS

1. Only trained and authorized employees are allowed to use boom or scissor lifts. If you aren't trained, stay off.
2. Read and obey all manufacturer's instructions and safety precautions.
3. Inspect all lifts prior to use. Defective equipment shall not be used.
4. A safety harness with shock absorbing lanyard must be worn while using boom lifts. Harnesses are not required for scissor lifts, provided you do not leave the work platform with surrounding guardrail.
5. Always stay inside the platform railing. Do not use planks or ladders to extend your reach.
6. Keep the safety chains up on scissor lifts.
7. Platforms or shelves are not allowed on the rails at any times.
8. Always lower the lift before moving.
9. Never use scissor lifts on uneven or unstable ground. They are designed for use primarily on concrete floors.

T. WELDING, CUTTING AND GRINDING

1. Hot work permits are required for all welding, cutting, grinding, and any other activities producing sparks, open flame, or other heat that could potentially ignite a fire. Hot work permits must be obtained **before** any torch cutting, grinding, welding or burning activities occur. Combustible gas monitoring with LEL alarm capability shall be conducted prior to and continuously during all hot work activities. No hot work will be permitted near grass areas when the humidity level is less than 30%. A sample hot work permit is attached (See attachment 'B').
2. Make sure your welding equipment is installed properly and grounded and in good working condition. All hoses and cables must be regularly inspected and in good condition.
3. Always wear protective clothing suitable for the welding or cutting to be done.
4. Always wear proper eye protection when welding, brazing, soldering or flame cutting. Once you remove your welding helmet, put on safety glasses.
5. Keep your work area clean and free of hazards. Positively be sure that no flammable, volatile or explosive materials are in or near the work area prior to work. Prior to work confirm the absence of combustible gas by use of a combustible gas meter with % LEL readings and alarm. Continuously monitor the atmosphere with a combustible gas meter with alarm.



6. Handle all compressed gas cylinders with extreme care. Keep caps on when not in use. Make sure that all compressed gas cylinders are secured to the equipment



- carriage, wall or other structural supports. When compressed gas cylinders are empty, close the valve, install the cap and return to correct bottle storage area.
7. Store compressed gas cylinders in a safe place with good ventilation. Acetylene cylinders and oxygen cylinders should be kept at least 20 feet apart.
 8. Do not weld or cut in confined spaces without special precautions and your Foreman's authorization.
 9. Do not weld on containers that have held combustibles or flammable materials.
 10. Use mechanical exhaust ventilation at the point of welding when welding lead, cadmium, chromium, manganese, brass, bronze, zinc or galvanized metals. These metals are highly toxic and their fumes should not be breathed.
 11. Make sure all electrical connections are tight and insulated. Do not use cables with frayed, cracked or bare spots in the insulation.
 12. When the electrode holder or cutting torch is not in use, hang it on the brackets provided. Never let it touch a compressed gas cylinder.
 13. Dispose of electrode and wire stubs in proper containers as stubs and rods on the floor are a safety hazard.
 14. Use weld curtains to shield others from the light rays produced by your welding.
 15. Make sure all compressed gas connections are tight and check for leaks. Do not use hoses with frayed or cracked spots.
 16. Keep your leads orderly and out of walkways. Suspend them whenever possible.
 17. DO NOT WELD if leads or machine are in or near water.
 18. Make sure a portable fire extinguisher is nearby.
 19. Keep your work area clean and free of hazards. When flame cutting, sparks can travel 30-40 feet. Do not allow flame cut sparks to hit hoses, regulators or cylinders.
 20. Use oxygen and acetylene or other fuel gases with the appropriate torches and tips only for the purpose intended.
 21. Never use acetylene at a pressure in excess of 15 pounds per square inch. Higher pressure can cause an explosion.
 22. Never use oil, grease or any other material on any apparatus or thread fitting in the oxyacetylene or ox fuel gas system. Oil and grease in contact with oxygen will cause spontaneous combustion.
 23. Always use the correct sequence and technique for assembling and lighting the torch. Always use the correct sequence and technique for shutting off a torch.
 24. Check valves must be used on all compressed gas cylinders to prevent back flow of



the gas.



U. FIRST AID AND MEDICAL

Sub-Contractors shall comply with applicable OSHA requirements pertaining to first aid and medical services for their personnel.

V. PLACEMENT OF ABOVEGROUND STORAGE TANKS (AST'S)

Contractors shall not place aboveground storage tanks on a Principal Builders jobsite without the approval and review of the Department of Safety and Security. When the request is approved the contractor or subcontractor will be provided a permit indicating the requirements for the AST. All tanks placed on Principal Builders property must have spill protection and adequately protected from vehicular traffic. The contractor or subcontractor must provide written procedures as to how they will refill their AST's. This information shall include all pertinent information and the names and license of the trucks to conduct refueling.

W. ASBESTOS AND LEAD ABATEMENT PROJECTS

PVSC's construction specifications provide specific guidance and direction as to how to properly abate asbestos or lead areas. Each of these projects requires special review and will be handled on a case-by-case basis for each project, during the initial project planning. Contractors working with asbestos and lead must be licensed to perform this work in Massachusetts and follow other regulatory requirements.

X. EMPLOYEE/SUPERVISOR CERTIFICATION FORM FOR VERIFYING REVIEW BY THE EMPLOYEE AND THE SUPERVISOR OF PRINCIPAL BUILDERS OVERVIEW OF SAFETY STANDARDS AND REQUIREMENTS

Employees/supervisors shall use the attached form (Attachment 'C') to verify the Principal Builders safety requirements have been reviewed with the employee. A copy of the form shall be forwarded to Principal Builders Project Manager



ATTACHMENT



**BEFORE INITIATING HOT WORK, CAN THIS JOB BE AVOIDED?
IS THERE A SAFER WAY?**

This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: brazing, cutting, grinding, and soldering, thawing pipe, torch applied roofing, and welding.

INSTRUCTIONS

- I. Program Coordinator or designee:
 - A. Verify precautions listed at right (or do not proceed with the work).
 - B. Complete and retain original.
 - C. Issue copy to person doing job.

HOT WORK BEING DONE BY:
 EMPLOYEE
 CONTRACTOR: _____

| | | | |
|---|---------|------|--------------|
| DATE: | JOB NO. | | |
| LOCATION/BUILDING & FLOOR: | | | |
| NATURE OF JOB: | | | |
| NAME OF PERSON DOING HOT WORK: | | | |
| I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for this work. | | | |
| SIGNED (Supervisor or Foreman): | | | |
| | | | |
| PERMIT EXPIRES | DATE | TIME | |
| | | | A.M. P.M. |

REQUIRED PRECAUTIONS CHECKLIST

- Available sprinklers, hose streams and extinguishers are in service/operable.
 - Hot Work equipment in good repair.
- Requirements within 35 ft. (11m.) of work
- Flammable liquids, dust, lint and oily deposits removed.
 - Explosive atmosphere in area eliminated. Verified by testing.
 - Floors swept clean.
 - Combustible floors wet down, covered with damp sand or fire-resistant sheets.
 - Remove other combustibles where possible. Otherwise protect with fire-resistant tarpaulins or metal shields.
 - All wall and floor openings covered.
 - Fire resistant tarpaulins suspended beneath work.
- Work on walls or ceilings
- Construction is noncombustible and without combustible covering or insulation.
 - Combustibles on other side of walls moved away.
- Work on enclosed equipment
- Enclosed equipment cleaned of all combustibles.
 - Containers purged of flammable liquids/vapors.
 - Pressurized vessels, piping and equipment removed from service, isolated and vented.
- Fire watch/hot work area monitoring
- Fire watch will be provided during and for 30 minutes after work, including any coffee or lunch breaks.
 - Fire watch is supplied with suitable extinguishers, and where practical, charged small hose.
 - Fire watch is trained in use of this equipment and in sounding alarm.
 - Fire watch may be required for adjoining areas above, and below.
- Other precautions taken
- Use of a combustible gas detector before and during hot work.



ATTACHMENT



Principal Builders Contract # _____

Sub Contractor: _____

Sub Contract Name: _____

**EMPLOYEE/SUPERVISOR CERTIFICATION FORM FOR
VERIFYING REVIEW BY THE EMPLOYEE AND THE
SUPERVISOR OF PRINCIPAL BUILDERS OVERVIEW
OF SAFETY STANDARDS AND REQUIREMENTS**

This is to certify that I have received a copy of Principal Builders **Overview of Safety Standards and Requirements**. I have read these instructions, understand them, and will comply with them while on Principal Builders project(s).

I understand that failure to abide by these rules may result in disciplinary action by my employer and possible denial of access to the sites.

I also understand that I am to report any injury to my supervisor or superintendent immediately and report all safety hazards.

I have received instruction on and/or reviewed the site specific emergency evacuation plan.

I further understand that I have the following rights.

I am not required to work in any area I feel is not safe. I am entitled to information on any hazardous material or chemical I am exposed to while working. I am entitled to see a copy of the Principal Builders Overview of Safety Standards and Requirements as well as my employer's safety manual. I will not be discriminated against for reporting safety concerns.

Employee Print Name: _____

Employee Sign Name and Date: _____

Supervisor Print Name: _____

Supervisor Sign Name and Date: _____

Copy: Employee _____

Contractor _____

Principal Builder Project Manager _____