

# **MONTEREY COUNTY**

**RESOURCE MANAGEMENT AGENCY**

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**PUBLIC WORKS – ARCHITECTURAL SERVICES**

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## **Owner Controlled Insurance Program (OCIP)**

**Safety Standards Manual**

**SCHILLING PLACE  
TENANT  
IMPROVEMENTS  
PROJECT No. 8862  
BID No. 10569**

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## PROJECT SAFETY POLICY

Each General Contractor, and each Subcontractor of any tier has agreed to supervise and direct the work, using their best management skills and technical expertise. The General Contractor will be solely responsible for all construction means, methods, techniques, sequences, and procedures. This includes all safety precautions and programs in connection with the work as well as for coordinating all portions of the work. Each subcontractor, of any tier, likewise has agreed to be responsible for all safety precautions and programs in connection with the work under the prime contract.

Each General Contractor will present a written site-specific safety program to The OCIP Safety Team for review. This safety program will meet or exceed all applicable federal, state, county and city laws, statutes, regulations, codes, ordinances, and orders of those governing bodies having jurisdiction over the work and which will meet or exceed the guidelines set forth in The OCIP Safety and Loss Prevention Program.

This document serves to provide certain guidelines for the General Contractor and subcontractor of any tier, to establish a safe and drug-free work environment. The guidelines outlined in this manual do not limit or prescribe the necessary safety or drug testing procedures. The General Contractor or subcontractor of any tier, must follow Federal, State, and Local Laws, ordinances, codes or regulations.

# INTRODUCTION

We have developed this manual to ensure pro-active safety processes are used on this project. You, as a General Contractor or Subcontractor on this Project, have a goal to prevent injuries to all employees and the down time associated with incidents and accidents. The requirements of OSHA, Federal, State and Local ordinances and this manual establish the standards that your safety and loss prevention programs must meet or exceed.

In addition to setting minimum standards, this manual promotes safety by facilitating on-site employee safety orientations designed to promote a safe work environment.

The information in this manual is not intended to alter the provisions of the Contract. In the event of a conflict or inconsistency, the most stringent standard will govern. Those states that have established their own job safety and health program will take precedence over Federal Regulations.

## A. General Information

The OCIP Safety Team's objective is to emphasize that protecting people and property are of paramount importance to the success of this Project. To accomplish this objective we are utilizing a pro-active safety process.

The pro-active safety process is a practical approach to the prevention of accidents. The emphasis is on discovering what causes accidents and identifying where in the work processes those causes are likely to occur. Only by breaking the cycle of accident evolution can accidents be controlled.

Accident prevention is a continuing process, not a fixed program. The OCIP Safety Team recognizes that the General Contractor and subcontractors of any tier, may have their own specific safety requirements. It is the responsibility of the General Contractor and subcontractors of any tier, to identify to the OCIP Safety Team how their program may deviate from the guidelines set forth in this manual prior to any deviation.

While it is the responsibility of each individual to work safely, it is ultimately the General Contractor and subcontractors who are responsible for seeing that all rules (safety and health) and practices are followed and enforced. Active participation of the General Contractor and subcontractors of any tier in construction safety and loss prevention programs is mandatory. General Contractor and subcontractors of any tier must demonstrate their employee's complete support and continuing involvement in all safety and loss prevention efforts.

Safety is not to be sacrificed for production. Safety must be considered an integral part of the planning process. The goal of the OCIP Safety Team, along with the General Contractor and subcontractors of any tier, is to eliminate accidents. The General Contractor and subcontractors of any tier are charged with the responsibility for developing, adhering to, and enforcing the safety and loss prevention program.

## **B. OCIP Safety Committee**

The OCIP Safety Committee will include members from Monterey County Resource Management Agency Public Works - Architectural Services, executive representatives from the General Contractor, OCIP Safety and other stakeholders, as appropriate. This committee shall meet quarterly to discuss the overall site program to ensure coordination and consistency for safety management across the Monterey County Schilling Place Tenant Improvements Project Site.

The responsibilities of this committee include:

- a. Ensure a Coordinated Safety Program
- b. Set policy and Direction
- c. Review and Adopt Annual Goals
- d. Review Performance

## **C. Safety Director Operations Safety Committee**

The Safety Director Operations Committee shall meet on a monthly basis and shall include each Construction Manager, General Contractor, Project Manager, Subcontractor, OCIP, and Owner safety representative. The responsibilities of the committee shall include:

- a. Review the performance of the safety program
- b. Developing Project specific goals and objectives
- c. Incident review
- d. Open safety observation notices and program trends
- e. Construction plans and job hazard analysis for upcoming work
- f. Status updates on Environmental Performance Commitment
- g. Sharing best practices

## **D. General Contractor Site Specific Safety and Loss Prevention Program**

The General Contractor's proposal shall include costs to establish and maintain a Site Specific Safety Program that meets or exceeds the requirements contained in this manual. If the OCIP Safety Manual is adopted, in addition the General Contractor must supply the OCIP Safety Representative with the documented Project specific safety items listed below. The Site Specific Plan must be submitted to OCIP Safety Representative for review at least 15 days prior to the initiation of construction activities.

Documented Project Specific Safety Items:

- Assignment, accountability and 24-hour contact information of personnel responsible for safety on the Project
- Scope of work evaluation
- Site Logistics Plan
- Fire Prevention Program
- Emergency Response and Evacuation Plan
- Public Protection Plan

If a subcontractor undertakes any construction or demolition activities not covered by this program, a specific safety activity plan must be submitted to and approved by the General Contractor for the Project prior to commencement of work.

## E. Drug Free Work Environment

In order to maintain a safe, healthful and efficient work environment, and to minimize absenteeism and tardiness, all Employers shall implement a Substance Abuse Prevention Policy that, at minimum, includes screening and testing as prescribed by this section.

An industry-accepted on-site instant drug screening protocol may be used for pre-employment project assessments of workers, post incident and reasonable suspicion testing, provided that all *inconclusive* screening results are referred to a Substance Abuse and Mental Health Services Administration (SAMHSA) (USDOT) Certified Testing Laboratory for confirmation. The test shall be capable of detecting the following drugs at cut off levels as specified.

<b>NAME OF DRUG</b>	<b>SCREENING THRESHOLD (Oral)</b>
Methamphetamine	<b>50</b> ng/ml
THC (Marijuana)	40 ng/ml
Cocaine	20 ng/ml
Amphetamines (Amp)	<b>50</b> ng/ml
Opiates (Opi)	<b>40</b> ng/ml
Phencyclidine (PCP)	<b>10</b> ng/ml

<b>NAME OF DRUG</b>	<b>SCREENING THRESHOLD (Urine)</b>	<b>CONFIRMATION THRESHOLD (Urine)</b>
Methamphetamine	<b>500</b> ng/ml	<b>250</b> ng/ml
THC (Marijuana)	50 ng/ml	15 ng/ml
Cocaine	<b>150</b> ng/ml	<b>100</b> ng/ml
Amphetamines (Amp)	<b>500</b> ng/ml	<b>250</b> ng/ml
Opiates "(Opi)	2000 ng/ml	2000 ng/ml
Phencyclidine (PCP)	25 ng/ml	25 ng/ml

Initial drug screening protocol will be used to obtain preliminary results only. A negative result on the initial screen concludes the test and it will be reported to the employer as negative. When an initial screen test is not conclusively negative, urine must be sent to a SAMHSA certified laboratory for GCMS confirmation, followed by Medical Review Officer (MRO) review if revealed positive by the laboratory. Specimens confirmed positive by the MRO will be reported to the employer. Split specimen procedures must be utilized.

If the initial test was performed using urine, then the specimen used for screening will be used to send to the lab for confirmation. In the event that the initial screening was performed using oral fluid, then a urine specimen must be collected and sent to the laboratory. For post-incident and reasonable suspicion tests, a breath alcohol test will be included consistent with US DOT requirements for breath alcohol testing. (See 49CFR Part 40.)

### ***Fundamental Requirements***

- a. General Contractor shall implement and enforce a policy that prohibits the possession, distribution, promotion, manufacture, sale, use or abuse of illegal and unauthorized drugs, drug paraphernalia, controlled substances and alcoholic beverages by Employees, agents or any person otherwise under the control of the Employer, including Employees and agents of Subcontractors and consultants while on the work site, or while otherwise covered by the OCIP while working on the Project. Further, Employees shall be prohibited from reporting to the premises under the influence of drugs or alcohol.
- b. The Policy must apply to all personnel, including but not limited to regular, part-time, probationary, casual and contract Employees of the company, as well as to Employees and agents of Subcontractors and consultants. The Employer shall take whatever legally permissible steps are necessary or appropriate to enforce compliance with this policy.
- c. Employees governed by this policy may possess a prescription medication in its original container and prescribed for current use of the person in possession by an authorized medical practitioner; provided that the Employee taking the prescription medicine perform no duties which may affect the Employee's work ability (particularly their alertness and coordination), safety and the safety of others. In the event of a report of such a prescription to the MRO, the MRO may advise the employer accordingly. Because marijuana remains illegal under Federal Law, medical marijuana cards or prescriptions permitting their use will not be allowed by workers on this Project, to the greatest extent permitted by law and, if applicable, any relevant Collective Bargaining Agreement.
- d. At a minimum, any worker covered under the OCIP shall be subjected to a pre-project drug screening protocol for drug use in accordance with the provisions of the General Contractor program within 48 hrs of the commencement of any work activities. A negative assessment result must be obtained prior to employment on this Project.
- e. Any worker covered under the OCIP shall be drug and alcohol tested in accordance with the provisions of the OCIP Program.
- f. When involved in any type of incident, requiring a clinical visit and/or resulting in property damage is in excess of \$ 500 dollars.
- g. The cost of all testing will be the responsibility of each employer of the effected employee.
- h. Any employee who fails or refuses to take a drug screen or drug and alcohol test in accordance with the terms of the contract shall be removed from the Project and not allowed back on the Project for a period of 6 months. Also any employee who is absent



from the Project more than 90 days must be Drug Screened before commencement of work.

## **F. Return to Work Program**

This is to establish basic guidelines for the General Contractor to establish Early Return to Work (transitional duty) work assignment for injured workers. Each Employer shall have a written Early Return to Work Program that shall be implemented on this Project unless specifically prohibited by the terms of a Collective Bargaining Agreement.

### **Benefits**

1. Effectively impacts the Employer's Experience Modification Rating and contributes to reduced insurance premiums.
2. May eliminate the need for vocational rehabilitation.
3. Boosts Employee morale and demonstrates that the Employer wants to cooperate with the injured worker.
4. A worker on transitional duty can be of value to an Employer if there is an alternative plan or job description available.

## DEFINITIONS

The following acronyms and titles may not reflect the actual titles and acronyms in use by all entities on this Project and do not have any force or effect beyond their use in the Safety Standards. Due to such differences in nomenclature among Owners, General Contractor and subcontractors, the following are used throughout the OCIP Safety Standards to establish the functional framework for the OCIP Safety Program.

**Alliant Insurance Services (Alliant).** The party responsible for brokering and administering the OCIP Insurance Program and developing and monitoring compliance with the Safety Standards.

**Authorized Person.** (In reference to an employee's assignment) Selected by the employer for that purpose.

**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.

**Contractor's Safety Representative (CSR).** The on-site designated and authorized employee of the General Contractor, assigned the responsibility of implementing the Contractor's Safety Program and/or Injury and Illness Prevention Program, including ongoing identification and correction of hazards.

**Employee.** Person employed by an Employer as defined by this section.

**Employer.** Firm or entity that has Employees working on site and is enrolled in the OCIP program. The term Employer includes the General Contractor, and all Subcontractors of all tiers.

**Field Superintendent.** An individual engaged by the General Contractor or a Subcontractor to oversees the entity's daily construction activities at the Site.

**Foreman.** A worker or tradesperson who is in charge of a construction crew.

**General Contractor.** The entity with which the Owner enters into this contract.

**OCIP Safety Team.** This is the management team that represents the safety and health interests of the OCIP in the prevention of insurance losses on the Project. The team includes Alliant, Insurance Carrier, and Monterey County identified representative(s), and is responsible for monitoring, evaluating and coordinating the General Contractor safety, health, and environmental compliance.

**OSHA.** OSHA as used in the context of these Safety Standards refers to Federal and or State agencies with jurisdiction over workplace occupational safety and health at the Project Site.

**Owner Controlled Insurance Program (OCIP).** Owner's wrap-up insurance program which provides insurance coverage for eligible and enrolled owner's representatives, General Contractor, and all Subcontractors of any tier of any tier, working on any of the Project site. The Owner identifies program participants.

**Qualified Person.** A person designated by the employer 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 relating to the subject matter, the work, or the Project.

**Site.** Location of construction activity covered by the Contract. "Site" is the geographical area of the location of work.

**Site-Specific Safety Program (SSSP).** General Contractor's Site-Specific Safety Program prepared in accordance with the requirements of this document and the Contract.

**Subcontractor.** Firm or other entity awarded work by the General Contractor, or another Subcontractor on a particular construction project. Subcontractor as used herein shall apply to all tiers of Subcontractors, as well as vendors and service providers performing work for the benefit of the General Contractor. For the purposes of the Safety Standards, vendors, suppliers, and service providers on the Project for the furtherance of the Project are covered by this definition and are subject to the provisions of the Safety Standards even though they may not be enrolled in the OCIP.

**Subcontractor Safety Representative (SSR).** Subcontractor Employee assigned the responsibility of implementing the Contractor's Safety Program and/or Injury and Illness Prevention Program, including ongoing identification and correction of hazards.

# RESPONSIBILITIES

## A. General Contractor Responsibilities

### Expectations

The General Contractor, and all Subcontractors of any tier, have the explicit responsibility to perform work in accordance with Federal, State, Local Laws, Ordinances, Codes, Regulations and these Safety Standards, affecting Safety and Health. This is in addition to compliance with the companies own requirements, contractors and subcontractors are accountable for fulfilling the responsibilities listed in this section.

### Safety Representatives

The General Contractor, and all Subcontractors of any tier shall have a designated Safety Representative available at the Site assigned the responsibilities of managing all aspects of safety related to employees under their direct control.

These duties may be performed by a Field Superintendent or Foreman having the required training, experience and qualifications listed in the OCIP Manual. These employees may have duties other than safety provided appropriate adherence to Federal, State, Local Laws, Ordinances, Codes, Regulations and these Safety Standards are followed by personal under their direct control.

The qualifications of the designated Contractor Safety Representative must be submitted to the Owner Representative for approval prior to assignment to the Site.

Qualifications of the designate Sub-contractor Safety Representative: must be submitted to the Contractor Safety Representative for approval prior to assignment to the Site.

Approval will be based on:

- Construction experience
- Knowledge of safety officer responsibilities
- Safety training as outlined in this manual

The Owner or Owner Representative reserves the right to direct the removal and replacement of a CSR or SSR if necessary.

The Contractor Safety Representative must have the following minimum qualifications:

- The CSR shall have minimum of (5) years of qualified project safety experience on large, similar type construction projects that is representative of the planned construction activities.
- Evidence of completing the OSHA 30 Hour Construction Outreach Training or equivalent within the last three years.
- Current CPR/First Aid Certification provided by The American National Red Cross or equivalent training.

- Ability to stop work in the event of workplace hazards until corrective action has been implemented.
- Understanding of Federal, State and OCIP Safety regulations.
- Ability to conduct appropriate incident investigations.
- Ability to communicate with field personal and project staff on relevant Health and Safety items.

The Subcontractor Safety Representative must have the following minimum qualifications:

- The SSR shall have a minimum of 3 -5 years of qualified project safety experience on similar type construction projects.
- Evidence of completing the OSHA 10 or 30 Hour Construction Outreach Training or equivalent with the past 3 yrs.
- Current First Aid/CPR certification provided by The American National Red Cross or equivalent training.
- Ability to stop work in the event of a workplace hazard, until corrective action has been implemented.
- Understanding of Federal, State Safety and OCIP Safety Regulations
- Ability to conduct appropriate incident investigations.
- Ability to communicate with field personal and project staff on relevant Health and Safety items.

### **On-Site Safety Representative or Designee Responsibilities**

Specific responsibilities of the safety designee or dedicated safety representative include, but are not limited to the following:

- a. Employee Safety Orientation and Training
  - Conduct orientation sessions for employees new to the site, prior to their beginning work
  - Participate in weekly tool box safety meetings; assist field supervisors, as requested, with meetings
  - Conduct weekly supervisor safety meetings
  - Instruct supervisors on safety rules and regulations
  - Instruct employees on the proper use and care of personal protective equipment
  - Instruct employees concerning special procedures (e.g. lock-out, excavation, confined space entry, etc.) as required by OSHA or this manual
  - Conduct hazard communication training
  - Conduct respiratory training as required
  - Conduct emergency evacuation training

- b. Record Keeping
  - Complete OSHA, state, federal, company and Project specific reports
  - Complete accident investigation reports
  - Complete inspection reports
  - Maintain training documentation
  - Complete and process OCIP safety and health reporting requirements, this includes but is not limited to inspections, incident/ accident reports and training logs.
- c. Safety Standards, Rules and Regulations Enforcement
  - Authority to stop work
  - Authority to take immediate corrective action
  - Implement, maintain, and update, as required, conditions and Project Site specific safety policies and procedures
  - Interpret and implement Site specific safety policies and procedures
  - Demonstrate, by example, proper safety behavior
- d. First Aid/ Medical Treatment
  - Ensure first aid supplies are adequate
  - Investigate accidents and complete or obtain accident reports
  - Coordinate transportation of employees with minor injuries to first aid station or designated medical facility
- e. General Responsibilities
  - Keep the OCIP Safety Team apprised of any safety related problems that have or may develop
  - Conduct work area safety inspections and forward results to the OCIP Safety Team
  - Conduct investigations of all accidents and incidents and forward reports to the OCIP Safety Team
  - Compile OSHA statistical information and copy the OCIP Safety Team

## **Orientation**

One of the requirements of the General Contractor, and all Subcontractors of any tier and their safety representatives or designees is to ensure that a complete basic safety orientation is conducted for all their employees new to the Site. A Project Orientation by the General Contractor is required before an employee can receive a project ID and enter the field. The purpose of the orientation is to provide employees awareness of what they can expect and what is expected of them on site.

### Scope

At a minimum, the orientation should include:

- Drug testing policies and consent form signed by the employee.
- Employee safety requirements and policies.
- Site Specific Safety and Health rules.
- Permitting procedures, including work permits, excavation, confined space entry, lock-out, etc.
- Hazard communication.
- Emergency alarms and evacuation procedures.

## **Documentation**

All employees will complete an Orientation Acknowledge form supplied by the General Contractor at the end of the orientation. Upon successful completion the employee will receive a hard hat sticker with an identification number to be worn on the employees hard hat at all times while on the Project. Documentation of successful orientation and identification of said employees will be kept by the Contractor Safety Representative, and be available upon request by the Owner or OCIP Safety.

## **Facility**

The General Contractor will facilitate the project orientation and provide an appropriate meeting place on site for use in conducting the orientation sessions.

## **Record Keeping**

Proper documentation and record keeping of safety and related functions are essential. All required documentation needs to be maintained on Site, available to the Owner Representative or OCIP Safety Team upon request. The Project Managers for the General Contractor and all subcontractors of any tier are responsible for ensuring that record keeping and related requirements are accurate and up-to-date.

## **Accident and Incident Investigations**

- **Accidents**

All accidents which result in first aid treatment must be investigated by the General Contractor's or Subcontractor's safety representative or designee and documented on a Project Accident Investigation Report. The report must be completed and submitted to the Contractor's Safety Representative if it involves a subcontractor and to the OCIP Safety Team if it involves employees of the General Contractor.

- **Major Accidents**

Only after appropriate actions have been taken to assure the safety and care of personal and/or property

Immediately notify the Owner Safety Representative, OCIP Safety Team, and the CSR of all major accidents.

All accidents resulting in a lost time injury, fatality, or damage to property or equipment shall be investigated by the field supervisor or safety representative for the General Contractor or subcontractor of any tier. A representative of the OCIP Safety Team may join in the investigation.

A thorough in-depth accident investigation should include, but is not limited to the following:

- An analysis of the accident
- A documented signed witness statement
- Accident scene photographs, sketches, and drawings
- Recommendations to prevent re-occurrence

Forms to be utilized in accident investigation reporting may include:

- Project Accident Investigation reports
- First Report of Injury
- Report of Disabling or Fatality, or other equivalent materials

- **Incidents**

All incidents, whether they involve injury or not (near miss) must be investigated by the field supervisor, safety representative or designee for the General Contractor or subcontractor and documented.

### **Emergency Response**

All Project Site emergencies must be reported immediately to the Contractor CSR, Owner Authorized Representative, and OCIP Safety. Incidents or injuries could include but are not limited to the following:

- Medical emergencies (e.g., amputations, thermal or chemical burns, unconsciousness, electrocution, poisoning, breathing difficulties, traumatic impact.
- Fatalities
- Bomb threats
- Workplace violence
- Civil disturbances
- Hazardous materials incidents
- Environmental contamination
- Property/utility damage
- Pedestrian injuries
- Structural failures and collapses
- Crane failures/Hoisting incidents
- Suspicious activities, items or deliveries
- Vehicular accidents
- Any other events that would potentially impact the health and safety of those working at the site or the general public.

Job Site Emergency Telephone Numbers shall be posted on the Project Site bulletin board.

A local street map clearly identifying the project and active entrances shall be maintained and posted on the Project Site bulletin board by the Emergency Telephone Numbers.

In the event that there are no hard-wire (“land line”) telephones available at the Project Site, the General Contractor shall identify and post an alternate number (in addition to 911) to be used to contact emergency service providers via cell phone. This is necessary, as dialing 911 on a cell phone does not always provide a direct connection to local Emergency Services.



## **Emergency Action Plan**

The General Contractor shall submit to the Owner (Monterey County) and OCIP Safety Representative prior to the start of work a comprehensive and enforceable Emergency Action Plan addressing, at a minimum, location of medical service facilities, locations of all emergency egress routes, emergency vehicle access routes, alarm systems, evacuation routes, post-evacuation assembly locations and personal accounting, response to medical emergencies and body releases;

The General Contractor shall review and revise this plan quarterly, or as required by the Owner (Monterey County) based upon any changes in the scope of work, existing site conditions, or the intended method of execution. A hard copy and a non-modifiable electronic version of all revisions shall be forwarded to the Owner (Monterey County) and OCIP Safety Representative.

The Emergency Action Plan should be communicated to all first-line supervisors, and should be posted throughout the Project Site and General Contractor and Subcontractor shanties, and communicated to workers during the Safety Orientation and weekly safety meetings.

The General Contractor shall maintain the following documents at the Project Site, and shall make available to all responders:

- Twenty-four hour contact list for Project supervisory staff;
- Site plans identifying stairs, scaffold stairs, hoist, flammable and combustible storage, compressed gas cylinder storage;
- Copies of Material Safety Data Sheets/Safety Data Sheets.

## **Emergency Notification (Fire or Medical)**

Call 911 or the Local Emergency Services.

At minimum caller should provide:

- Location of accident or incident
- Location and number of injured worker(s) (Medical)
- The Body Part affected (Medical)
- Cause of injury
- Company working for
- Call back cell phone number
- Caller name

In case of fire in any building:

- Evacuate the immediate area, and
- Activate the fire alarm system (if available), and
- Call the Fire Department.

For fire outside of buildings:

- Evacuate the immediate area, and
- Call the Fire Department.

## **Security – Parking, Identification Procedures, Vehicles, Delivery Personnel**

- All construction Project access will be through the entrances designated by the Owner's Security representative.
- Employees must park in designated construction parking areas. No parking will be permitted in un-designated areas. Violation of this policy may result in the vehicle being towed at the vehicles owners expense.
- All visitors shall check in and sign in with an appropriate site representative.
- Overtime and weekend work must be scheduled and coordinated with the appropriate Owner Representative.
- All new hires are to report to the appropriate hiring trailer or facility of the General Contractor. Following Project orientation, successful drug screening and required identification sticker, the employee shall proceed to his/her work location or trailer on the construction site.

## **Safety Observations**

The OCIP Safety Team will complete written Safety Observations of work activities that are not in compliance with the Project's safety policies and procedures. If the General Contractor or Subcontractor receives a Safety Observation, they should immediately correct the hazard noted on the notice, document the corrective action, or reason for delayed abatement and return the report to the OCIP Safety Team within 24 hrs.

Subcontractor safety violations corrective action forms must also be submitted to the Contractors Safety Representative.

The Safety Survey and Corrective Action Forms are listed in the Appendix of this document.

## **B. Subcontractor Responsibilities**

Subcontractors, of any tier, are responsible for complying with the safety requirements outlines by both the OCIP and the General Contractor, even though some of the requirements may be above and beyond the subcontractor's own safety policies and federal and state OSHA requirements.

Subcontractors of any tier are responsible for the administration of the Project Site safety and security procedures, including but not limited to:

- Providing a list to the General Contractor of all competent or qualified personal required for their scope of work.
- Providing the names of all CPR/First Aid employees on site.
- Providing the General Contractor with a list of all Hazardous Materials or items used on site with all updates MSDS sheets.
- Providing a list of supervisory personal including off duty contact information.
- Adequately identifying tools and equipment
- Securing all tools and equipment at the end of the shift to prevent vandalism, theft or unauthorized use.
- Assuring all subcontractor employees comply with Project rules and regulations
- Assuring proper identification is acceptable and displayed while on the Project Site

## **Project Rules and Regulations**

Good conduct is essential to the common good of all employees and the efficient progress of the job. Undesirable conduct including, but not limited to the following will not be tolerated and could be grounds for dismissal from the Project.

- Unauthorized possession of any Project property or material
- Possession of or use of intoxicants on premises, regardless of source
- Engaging in disorderly conduct
- Gambling, including sale of chances
- Fighting on Project premises
- Unauthorized sleeping on the job during working hours
- Failure to wear or use required safety equipment
- Failure to observe safety, sanitary or medical rules and practices
- Illegal possession or use of narcotics or non-prescribed tranquilizers or pep pills on premises, or attempting to bring them on the Project Site
- Possession or use of firearms, weapons, or explosives is expressly prohibited on the Project premises.
- Willful defacing or damaging of equipment, tools, material or other property of the Project or General Contractor or Subcontractors
- Distributing or posting literature, photographs or other printed material, soliciting or attempting to solicit or collect funds without prior permission from the Owner.

## **Enforcement**

The Owner and its OCIP representative reserves the right to enforce all security and safety regulations. The Owner and its OCIP representative neither implies nor assumes responsibility for safety of employees, damage, fire or theft of employees and tools, vehicles and material.

## **Field Supervisors**

The Field Supervisors have the responsibility for overall training, control, and conduct of personnel on their crew. As first line supervisors, their role in the safety and health program is crucial because they set standards by which their employees work.

The Field Supervisors' safety responsibilities include, but are not limited to:

- Task specific safety training
- Safety inspection
- Toll box safety meetings
- Accident investigation
- Pre-Task Planning/Daily Briefing

Every work operation should have a Pre-Task Plan, Job Hazard Analysis (JHA) to identify work operations, potential hazards, and control of hazards through engineering controls and/or through Personal Protective Equipment (PPE). JHA's are to be completed by a supervisor familiar with the task to be performed.

## **Daily Briefing**

The General Contractor and each Subcontractor should conduct a pre-shift production and safety meeting at the start of each shift. A daily briefing form should be utilized to discuss and review the day's operations with each trade signed by all participants. This form will be an original signed by all participants and made available to the Contractor Safety Representative or OCIP Safety Representative upon request.

## **C. OCIP Safety Team**

The OCIP Safety Team is responsible for generating and maintaining a high level of commitment for safe operations among all personnel assigned to the Project Site.

Responsibilities and duties of the OCIP Safety Team include, but are not limited to, the following:

1. Compile, follow-up, and maintain safety performance statistics for the Project. Communicate above information to the Project's senior management to ensure they are informed and involved in the safety program.
2. Keep apprised of new regulations and developments to keep the safety policies and procedures current and effective.
3. Conduct safety surveys of General Contractor and subcontractor activities to observe safety performance and make appropriate recommendations.
4. Review and communicate methods and procedures to foster the highest level of accident prevention performance possible. Provide such information to the safety representative or designee.
5. Provide special consulting, training, etc., to the General Contractor and subcontractors regarding problems and challenges that may arise on the project.
6. Assist with the first tier Subcontractors' employees' Project orientation.
7. Conduct accident investigations if required.
8. Administer the Project Safety Incentive Program if one is implemented.
9. Review all accident investigation reports to ensure thorough investigations were conducted to control future accidents.
10. Disseminate safety bulletins.
11. Distribute written information to the safety representative or designee regarding new proactive requirements, regulations or developments in safety.
12. Review and evaluate safety meeting minutes from the General Contractor to ensure that quality safety meetings are held.
13. Provide this safety manual, other written safety information, posters, etc., as needed.
14. Provide coordination with public and regulatory agencies.
15. Provide OSHA 10 and 30 hour OSHA Construction Outreach Training and other pertinent safety related awareness courses, to Owner Representatives, General Contractor Personnel and Subcontractor employees, training will be conducted exclusively at the discretion of the OCIP Safety Team.

# SAFETY AND HEALTH PROCEDURES

The safety procedures established for this project are based on current work activities. Future work activities may require the development of additional safety procedures or clarification of existing policies and procedures.

It is the responsibility of each employee to work in a safe manner. However, it is ultimately the responsibility of the General Contractor and subcontractors to see that all safety and health rules and practices are followed.

Safety is never to be sacrificed for production. The safety goal for this Project is to prevent accidents.

## 1. Administrative Requirements

Employers must meet certain administrative requirements that may include Cal/OSHA, Federal OSHA, Local or City Regulations, including specific registration, permitting certification, recordkeeping, and posting of information in the workplace.

a. Documents required at the Project Site could include but are not limited to the following:

- IIPP Program
- Code of Safe Practices
- All Cal/OSHA requires permits or certifications
- Respiratory Protection Program
- Heat Illness Prevention
- Fall Protection plan
- OSHA Log 300
- Lock-out/block out activity records
- Training/Inspection Records

b. Postings could include but not limited to:

- Cal/OSHA poster “Safety and Health Protection on the Job”
- Code of Safe Practices
- Emergency Phone Numbers
- Employee Access to Medical Records
- Hazard Warning Signs
- Operating Permit for air tanks
- Operating Rules for industrial Trucks

## 2. Aerial Devices and Elevating Work Platform

- Only authorized personal may operate aerial devices
- Aerial devices must not rest on any structure
- Controls must be tested before use
- Workers must stand only on the floor of the basket. **No planks, ladders or other means are allowed to gain greater heights.**
- A fall protection system must be worn and attached to the boom or basket.
- Brakes must be set when employees are elevated
- Belting off to an adjacent pole, structure or equipment while working from an aerial device is not permitted.

- An aerial lift must not be moved when an employee is on the elevated boom platform unless the operating conditions listed in Cal/OSHA 8CCR: 3648 (I) or manufactures specifications are met. The most stringent standard must be adhered to.

### **3. Elevating Work Platforms**

- a. The Platform deck shall be equipped with a guardrail or other structure around its upper periphery. Where the guardrail is less than 39 in. high, a personal fall protection system is required.
- b. The platform shall have toe boards at sides and ends
- c. Unless recommended for such use by the manufacture, no elevating work platform shall be used on any inclined surface.

The following information must be displayed on the device

- Manufacture's name, model, and serial number
- Rated capacity at the maximum platform height and maximum platform travel height.
- Operating instructions
- Cautions and restrictions
- Devices must be designed to applicable (ANSI) standards

### **4. Airborne Contaminants & Dust**

The employer must control employee's exposure to airborne contaminants and employee's skin contact. Airborne contaminants suspended in the air can exist in different forms including gases vapors, and particulates (particles of either liquids or solids.)

Airborne contaminants must be controlled by:

- Applying engineering controls
- Removing employees from exposures to the hazard and by limiting the daily exposure of employees to the hazard
- Providing respiratory protection equipment whenever such engineering controls are not practical or fail to achieve full compliance
- Asbestos is to be handled only by qualified and certified personnel
- The General Contractor must determine the existence of asbestos in buildings/building materials prior to any work activities.
- Abatement Subcontractors must be approved in accordance with State, Federal, and Local requirements for removal and disposal of asbestos containing material and encapsulation.
- If there is discovery of Asbestos Containing Material (ACM) or Presumed Containing Materials (PACM) in the employees working area, all work process shall be stopped in such areas until appropriate personnel have been notified and the decision has been made by appropriate qualified or certified personnel that work in the area is safe to precede.

### **5. Air Compressors**

- Employers must obtain a DOSH permit for the air tanks or air compressors operated at a work Site.

Exception: No permit is required for tanks with a diameter of less than 6 in., tanks equipped with a safety valve set to open at no more than 15psi pressure, or tanks having a volume of 1 ½ cu. ft or less with a safety valve set to open at no more than 150 psi.

- Warning signs are required for electric air compressors equipped with an automatic-start function.
- Safety valves must be popped weekly.
- Air tanks must be drained per manufactures recommendation.
- Fans shall be guarded with a shroud or side screens.
- Portable air compressors on wheels must be prevented from rolling.

## 6. Barricades

- Barricades shall be erected around excavations, holes or openings in floor or roof areas, edges of roofs and elevated platforms, around certain types of overhead work, and wherever necessary to warn or protect people against falling in, through or off.
  - Barricades must be suitable for the area of use (i.e., blinker type barricade or protective barricade to provide physical protection from falling).
- To ensure the safety of the general public, the Employer shall provide and maintain adequate protection, such as chain link fences, gates and barricades, to separate work activities as required by the activity or from areas outside Project Site limits.
  - Barricades must be suitable for the area of use (i.e., blinker type barricade or protective barricade to provide physical protection from falling).
- Barricades/fences are to be placed around all construction trenches. Barricades could include construction type caution tape within fenced construction areas of the site. Construction tape must be offset from trench excavations a minimum of 3' and visible above spoil piles.
- Red warning tape/signs shall only be used where an immediate hazard exists
- All employees shall be instructed that danger signs or red danger tape indicate immediate danger and that special precautions are necessary.
- Yellow warning tape/signs should be used to indicate a potentially hazardous situation that could result in death or serious injury
- All employees shall be instructed that caution signs/tape indicate a possible hazard against which proper precaution should be taken
- General safety signs shall be used where there is a need for general instruction and suggestions relative to safety measures.
- Portable fencing shall be installed around construction work areas, construction storage areas, and construction heavy equipment if they are not otherwise protected within the confines of the Project's perimeter barricade.

- Portable fencing shall be installed/braced to prevent being blown over during windy conditions.
- Base supports of portable fencing shall be installed/ placed to eliminate tripping hazards when fencing is placed adjacent to sidewalks and walkways.
- The Owners Authorized Representative reserves the right to prohibit use of, temporary fence panel systems that require the use of a tubular or pedestal base support system that presents a potential trip hazard to pedestrians.

## **7. Code of Safe Practices**

The Code of Safe Practices is a set of Project Site rules that stipulate how to perform job duties safely and to keep the Project Site safe. The following are selected requirements;

- The employer must develop and adopt a written Code of Safe Practices.
- It must be specific to the employers operations
- It must be posted at each jobsite office or be readily available at the jobsite
- Workers, when first hired, shall be given instructions regarding the hazards and safety precautions and directed to read the Code of Safe Practices
- Supervisors shall conduct toolbox or tailgate safety meetings, or equivalent, with their crews at least every 7 working days to emphasize safety
- The General Contractor or Subcontractor Field Supervisor or Foreman shall conduct a pre-shift production and safety briefing prior to the start of each shift. Documentation of said briefing shall be signed by all participants and made available to the General Contractor or Owners Safety Representative upon request.

## **8. Concrete Construction**

Injuries and illnesses common to the concrete construction industry include

Burns, rashes, and skin irritation, silicosis and respiratory disease, broken bones, lacerations, and crushing caused by falls from elevated work surfaces, are all causes of incidents associated with concrete construction.

Because the hazards associated with concrete construction are great employees must use appropriate personal protective equipment and conform to safe work practices.

Placement of Concrete:

- Concrete pumping equipment and placing booms shall be set-up and operated according to manufacturer's guidelines and the Title 8 Safety Orders.
- The manufacturer's operation manual shall be maintained in legible condition and shall be available at the Project Site.
- Controls in the equipment shall have their function clearly marked.



- Operation of concrete placing booms in proximity of overhead high-voltage lines shall be in accordance with Article 37 of the High-Voltage Electrical Safety Orders.
- Equipment shall be inspected by a qualified operator prior to daily use and the inspection must be documented.

## Masonry Construction

- All masonry walls more than 8ft. high must be braced to prevent overturning and collapse unless the wall is adequately supported through its design or construction method. The bracing shall remain in place until permanent supporting elements of the structure are in place.
- A limited access zone (LAZ) shall be established whenever a masonry wall is being constructed and must be established before the start of construction.
- The LAZ shall be established on the unscaffolded side of the work area.
- The width of the LAZ shall be equal to the height of the wall to be constructed plus 4ft. and shall run the entire length of the wall.
- The LAZ shall be entered only by employees actively engaged in constructing the wall
- The LAZ shall remain in place until the wall is adequately supported to prevent collapse.
- Walls over 8' in height shall be adequately supported to prevent overturning and to prevent collapse unless the wall is adequately supported through design or construction method to prevent overturning or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place.

## **9. Control of Employee Exposure from Dust Generated by Concrete or Masonry**

During operations in which powered tools or equipment are used to cut, grind, core, or drill, concrete or masonry materials, a dust reduction system shall be applied to effectively reduce airborne particulate.

### **Safety and effectiveness of dust reduction systems**

- Procedures shall be implemented to ensure that dust reduction systems maintain their effectiveness for dust reduction throughout the work shift.
- Dust reduction systems shall be installed, operated, and maintained in accordance with manufacturer recommendations to the extent they exist.
- Local exhaust ventilation systems shall be designed, tested, maintained, used, and the waste materials they collect disposed of, in compliance with applicable requirements of Sections 1530 and 5143 of The Cal/OSHA Safety Orders

- Where electrical tools are used with water as a dust reduction system, this shall be done in accordance with applicable requirements of the Electrical Safety Orders.
- Exceptions are applicable only to the areas or work processes listed in The Cal/OSHA Construction Safety Orders, 8CCR: 1530.1

## **10. Precast, Pre-Fabricated Concrete Construction, Tilt-Up, Panels**

- An erection plan, addenda, and procedure shall be prepared by or under the direction of a professional Engineer registered in California.
- The erection plan, addenda, and procedure shall be available at the Project Site
- Job inspections shall be made by the responsible engineer (or representative) during the course of erection.
- Proposed field modifications shall be approved by the responsible engineer.

## **11. Rebar and Other Impalement Hazards**

- Employees working at grade or at the same surface as exposed protruding reinforcing steel or other similar projections shall be protected against the hazard of impalement by guarding all exposed ends that extend up to 6 feet above grade or other work surface, with protective covers, or troughs.
- Employees working above grade or any surface and exposed to protruding reinforcing steel or other similar projections shall be protected against the hazard of impalement. Protection shall be provided by:
  - The use of guardrails, or
  - Approved fall protection systems meeting the design requirements of Article 24, of the Cal/OSHA Construction Safety Orders or
  - Protective covers as specified in those same orders
- All protective coverings must meet or exceed the protective covers specification, testing and approval of the applicable Cal/OSHA Construction Safety Standards as listed in 8CCR: 1712

## **12. Confined Space**

Every year confined space entrants and would be rescuers die from hazards associated with confined space entry. Hazards such as oxygen deficiency, toxic and explosive atmospheres and uncontrolled energized equipment, are contributing factors to many of these unfortunate events.

In order to minimize unforeseen incident employers on site must:

- Recognize a confined space and the specific hazards associated with that space

- Know and understand T8 CCR 5156, 5157, 5158 and related requirements concerning respiratory protection, fall protection, lockout/block out procedures, fire prevention, and rescue.
- The employer is to develop a written, understandable confined space operating and rescue procedure. This procedure must be made available to all affected employees.

Note for most Construction work 5158 applies; however, work in confined spaces during refurbishing operations may be subject to the permit-required confined space regulations in T8 5157.

The Contactor is responsible for controlling all access into permit-required confined space via a permitting process.

- Confined space is defined in T8 5158 as space that exhibits both of the following conditions
  - The existing ventilation does not remove dangerous air contamination or oxygen-deficient air that exist or may exist or develop
  - Ready access or egress for the removal of a suddenly disabled employee is difficult because of location or size of the opening(s)

Examples of locations which may exhibit confined-space conditions:

- Trenches and excavations
- Sewers and drains
- Vaults
- Crawl Spaces
- Pits, tubs, and bins
- Pipelines

Employers must check initially and if conditions can change, employers must check on an ongoing basis to discern whether work locations exhibit confined-space conditions.

If confined-space conditions have been identified, the following must be completed before employee may begin work:

- Written operating procedures must be prepared, and employees must be trained.
- Lines containing hazardous substances must be disconnected, blinded, or blocked
- The space must be emptied, flushed or purged.
- The air must be tested for dangerous contamination or oxygen deficiency
- Ventilation must be provided if testing reveals any atmospheric hazard.

Working in a confined space where dangerous air contamination exists requires:

- Appropriate respiratory protection
- Provisions for ready entry and exit where feasible
- The wearing of a safety harness attached to retrieval line and retrieval equipment.

- One standby employee (with entry gear) trained in First Aid and CPR plus one additional employee within sight or call.
- Effective means of communication between the employee in the confined space and the standby employee
- Ongoing atmospheric testing for dangerous air contamination and oxygen deficiency
- Ongoing surveillance of the surrounding area to avoid hazards, such as vapors drifting from nearby tanks, piping, sewers, and operations.

### 13. Cranes

The term crane as used in this section shall be construed to include boom trucks and similar truck-mounted cranes.

- Cranes and derricks exceeding three tons rated capacity shall not be used in lifting service until an approved certifying agent has certified the equipment.
- Current annual and quadrennial (where required) inspection certificates shall be maintained on each crane.
- Cranes that do not have such evidence of inspection shall not be permitted to operate on the Project.
- Current daily and periodic inspection records shall be maintained on each crane.
- An approved certifying agent shall re-inspect any crane that is involved in any incident or is damaged during set-up or operation, and a new certificate of inspection issued prior to being returned to service.
- Only Employees authorized by the General Contractor and trained, or known to be qualified, in the safe operation of cranes or hoisting apparatus shall be permitted to operate such equipment.
- Where required, Operators shall have valid evidence of current licensing or certification in accordance with state and local requirements.
- Operators not having such evidence where required shall not be permitted to operate applicable machinery (except under terms and conditions prescribed for Trainees by applicable regulations).
- Outriggers will need to be fully extended during all lifts. If geometry factors prevent fully extending the outriggers, they need to be extended as far as possible and “off the rubber” load charts limits shall be used.
- Picks off the rubber will be performed in accordance with manufacturer’s specifications.
- All mobile cranes having either a maximum rated boom length exceeding 200 feet or a maximum rated capacity exceeding 50 tons shall be equipped with a load indicating device or a load movement device.
- Cranes shall be equipped with a boom angle or a boom radius indicator and clearly legible load chart in clear view from the Operator’s position.
- An effective, audible warning and operating signal device (such as a horn) shall be provided on the outside of the crane. The controls shall be in easy reach of the Operator.
- When required by the manufacturer’s or certifying agent’s instructions, outriggers shall be set so that wheels or crawler tracks within the boundary of the outriggers shall be relieved of all weight by the outrigger jacks or blocking.

- Plates, pads or mats shall always be used under the outriggers or crawlers of all cranes when a lift exceeds 75% of the capacity of the crane as it is configured for that lift. The plates, pads, or mats shall be of suitable material and size to support the crane on the surface that it is set up on.
- The Employer shall ensure that a qualified person visually inspects the crane, derrick, or hoist's controls, rigging and operating mechanism prior to the first operation of any work shift. Records of daily inspections by the Operator or other qualified person shall be maintained on the crane, and must be available for review upon request.
- Adjustments and repairs to the crane shall only be made by a qualified person.
- A fire extinguisher of not less than 10-BC rating shall be kept in serviceable condition and readily accessible to the Operator unless otherwise stated by the manufacturer.
- Operations should be conducted and the job controlled in a manner to prevent loads from being passed directly over workers, occupied workspaces, or occupied passageways.
- A qualified signal person shall be provided when the point of operation is not in full and direct view of the Operator unless a signaling or control device is provided. Only one person shall be permitted to give signals to the Operator.
- Any Employee involved in the operation may give a "stop" signal if such a signal is warranted.
- A legible chart depicting and explaining the system of crane signals used shall be conspicuously posted in the vicinity of the hoisting operation.
- All loads shall be rigged by an identified, qualified, and authorized Rigger.
- No Employee shall be permitted to ride on loads, hooks, or slings of any derrick, hoist, or crane.
- Swing radius protection shall be provided where a rotating crane is positioned to operate in areas where persons may be caught between rotating parts and fixed objects or non-rotating crane components.
- Tag lines, restraint lines, or guide ropes shall be used on all loads except where their use presents a greater hazard. Such lines or ropes should be insulated to prevent shock, and shall not contain knots or splices that may snag on an object.
- Cranes, hoists, or derricks shall not be left unattended while the load is suspended unless the load is over water, a barricaded area, or is blocked up or otherwise supported.
- Before leaving the crane unattended, the Operator shall:
  - Land or properly secure any attached load.
  - Disengage clutch (if applicable).
  - Set travel, swing, boom brakes, and other locking devices unless otherwise specified by the certifying agents.
  - Put controls in the "off" position.
  - Stop the engine.
  - Secure the crane against accidental travel.
- In all operations where the weight of the load being handled is unknown and may approach the rated capacity, a qualified person shall determine the magnitude of the load unless the crane is equipped with a load-indicating device.

The General Contractor shall provide a qualified person to direct the lift. The qualified person shall see that:

- The crane is properly leveled for the work being performed and blocked where necessary.

- The load is well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches.
- A designated person shall monitor the clearance between crane booms, load lines, and loads, and power lines and alert the Operator when necessary.
- All work in and around power lines must follow applicable State Regulatory Standards.
- Crane inspections should be made available at all time at the project site.

#### **14. Rigging, Slings and Hooks**

- Chains will be prohibited as rigging materials for any lifts.
- Hoisting hooks shall be of the safety latch-type.
- Crane hooks with cracks or with deformation of throat opening more than 15 percent in excess of normal opening or more than 10-degree twist from plane of unbent hook shall be removed from service.
- Ropes shall be inspected for proper lubrication, excessive wear, broken strands, and proper weaving.
- Slings will be inspected daily. Any wears showing deformation or damage will be permanently removed.
- “Free rigging” will not be permitted for any reason.
- In order to determine proper time for replacement, a continuing inspection record shall be maintained for hoisting ropes. Conditions such as the following shall be reason for replacement:
  - In running ropes, 6 randomly distributed broken wires in one rope lay, or 3 broken wires in one strand in one lay.
  - Wear of 1/3 the diameter of outside individual wires.
  - Kinking, crushing, bird caging, or other damage resulting in distortion of the rope structure.
  - In stranding ropes, more than 2 broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.
  - Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
- Fixtures are usually attached to wire rope by the use of wire rope clips. The clips must be attached with the inside curve of the U-bolt against the dead, or short end of the wire rope, and flat clip (saddle) against the live, or long end of the wire rope.
- Each day before being used, wire rope slings, alloy steel chain slings, metal mesh slings, and natural and synthetic fiber rope slings, and all fastenings and attachments shall be inspected for damage or defects by a qualified person.
- Slings shall have permanently affixed tags stating the following:

- Manufacturer's name or trademark.
- Rated capacity.

## **15. Critical Lifts (Cranes, Boom Trucks, Derricks, Etc.)**

A Critical Lift Plan shall be prepared for all lifts that:

- Exceed 75% of the lifting device's capacity as configured for that lift; or
- Is deemed a critical lift by the Owner or Authorized Representative by reason of potential negative consequences to safety, structure, or schedule; or
- Involve two or more cranes or lifting devices.
- A qualified person shall prepare the Critical Lift Plan. The qualified person preparing the plan may be the crane Operator, lift supervisor, or rigger. The crane Operator, lift supervisor, and rigger shall participate in the preparation of the plan. The plan shall be documented, and a copy provided to the General Contractor and the Authorized Representative. The plan shall be reviewed by, and signed by, all personnel involved with the lift.
- The plan shall specify the exact size and weight of the load to be lifted and all crane and rigging components that add to the weight. The manufacturer's maximum load limits for the entire range of the lift as listed in the load charts shall also be specified.
- The plan shall specify the lift geometry and procedures, including the crane position, height of the lift, the load radius, and the boom length and angle, for the entire range of the lift.
- The plan shall designate the crane Operator, lift supervisor, and rigger, and state their qualifications.
- The plan will include a rigging plan that shows the lift points and describes rigging procedures and hardware requirements.
- The plan will describe the ground conditions, outrigger or crawler track requirements, and, if necessary, the design of mats, necessary to achieve a level, stable foundation of sufficient bearing capacity for the lift.
- For floating cranes or derricks, the plan shall describe the operating base (platform) condition and any potential list.
- The plan will list environmental conditions under which lift operations are to be stopped.
- The plan will specify coordination and communication requirements for the lift operation.

- For tandem or tailing crane lifts, the plan will specify the make and model of the cranes, the line, boom and swing speeds, and requirements for an equalizer beam.

## **16. Demolition**

- A DOSH permit is required for demolitions of any building or structure more than 36ft. high. The Project Administrator shall hold a Project Permit and all other employers directly engaged in demolition or dismantling activity shall hold an Annual Permit.
- A pre-demolition survey must be made to determine whether the planned work will cause
  - Any structure to collapse
  - Worker exposure to hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances.
  - Worker exposure to Asbestos or Lead
  - Worker exposure to carcinogenic chemicals
  - Worker exposure to silica
  - Utilities to the structure being demolished must be turned off or protected from damage
- The Contactor shall develop an Emergency Call List for all known utility owners prior to the start of demolition work.
- A site plan must be marked up to show the locations of known utilities and shut off valve controls.
- Pipe-covering insulation and column fire protection, along with HVAC duct will be surveyed for asbestos.
- Adequate dust controls procedures shall be implemented during demolition, stockpiling and loading operations.
- The General Contractor and Employer must check continually for hazards created by weakening of the structural members. If such hazards occur it must be corrected before workers may continue.
- Chutes or chute sections that are at an angle of more than 45 degrees from the horizontal must be entirely enclosed except for openings equipped with closures at or about floor level for the insertion of materials.
- Any chute opening into which employees dump debris by hand must be provided with a guardrail.

## **17. Electrical**

- Only qualified persons may work on electrical equipment or systems.
- Maintenance of electrical installations is required to ensure their safe condition.
- Electrical equipment and wiring must be protected from mechanical damage and environmental deterioration.
- Covers or barriers must be installed on boxes, fittings, and enclosures to prevent accidental contact with live parts.
- Flexible cords may be used in place of permanent wiring methods for temporary work if the cords are equipped with an attachment plug and energized from an approved receptacle.



- Flexible cords must be Type S and cannot be spliced unless they are size No. 12 (or larger).
- Skirted attachment plugs must be used on all equipment operating at more than 300 V
- Each receptacle must have a grounding contact that is connected to an equipment grounding conductor.
- Temporary wiring must be grounded.
- Electrically powered tools and electrical equipment with exposed, noncurrent-carrying metal parts must be grounded.
- **Exception:** Double insulated powered tools need not be grounded.
- Damaged or defective tools and cords shall be removed from service
- The General Contractor is responsible for designing and implementing a cord inspection program.
- Temporary lighting must be equipped with guards to prevent contact with lens or bulb.
- GFCI's are required for all temporary electrical wiring used cords and equipment.

## **18. Emergency Medical Services**

Emergency Medical Services (EMS) must be readily available.

- A first aid kit must be provided by each employer on all Project Sites and must contain the minimum of supplies as determined by an authorized licensed physician or as listed in T8 1512(c).
- The contents of the first-aid kit shall be inspected regularly to ensure that the expended items are promptly replaced.
- Trained personnel in possession of a current Red Cross First Aid certificate or its equivalent must be immediately available at the Project Site to provide first aid treatment.
- Each employer must ensure that its employees have access to emergency medical services at the Project Site. Where more than one employer is involved in a single construction project on a given construction site, the employers may agree to ensure employee access to emergency medical services for the combined work force present at the Project Site.
- Each employer shall inform all of its employees of the procedure to follow in case of injury or illness.
- The employer shall have a written plan to provide emergency medical services.
- Proper equipment for prompt transport of the injured or ill person to an EMS facility or an effective communication system for calling an emergency medical facility, ambulance, or fire service must be provided. Telephone numbers for listed emergency services must be posted
- The employers on the Project may agree to ensure employee access to emergency services for the combined work force present at the Project Site.

- Exposure to blood borne pathogens is considered a job-related hazard for workers who are assigned first aid duties in addition to construction work. Although construction employees are specifically exempted from certain regulatory requirements they are required to provide appropriate protection for employees who may be exposed to blood borne pathogens when providing first-aid.

## **19. Erection and Construction**

### **Truss and beam requirements**

- Trusses and beams must be braced laterally and progressively during construction to prevent buckling or overturning. The first member shall be plumb, connected, braced, or guyed against shifting before succeeding members are erected and secured to it.
- An erection plan and procedure must be provided for trusses and beams more than 25 ft. long. The plan must be prepared by a California-registered Professional Engineer, and it must be followed and kept available on the Project Site for inspection by Cal/OSHA staff.

### **Structural steel erection**

- A load shall not be released from its hoisting line until the solid web structural members are secured at each connection with at least two bolts (of the same size/strength as indicated in the erection drawings), and drawn wrench tight.
- Steel joists or steel joist girders shall not be placed on any support structure until the structure is stabilized.
- When steel joist(s) are landed on a structure, they shall be secured to prevent unintentional displacement prior **to installation**.
- Floors must be planked at every other story or 30 feet, whichever is less.
- A floor must be installed within two floors below any tier of beams on which erection, riveting, bolting, welding, or painting is being done; otherwise, fall protection is required.
- 100% fall protection is required when workers are connecting beams where the fall distance is greater 6 ft.
- During work other than connecting operations, fall protection is required where the fall distance is greater than 6 ft.
- All containers used to manually lift materials, must have an attached manufactured labeled lifting capacity.
- Before any steel erection begins, the controlling General Contractor must provide the steel erector written notifications related to concrete strength and anchor bolt repair/replacement.
- Prior to removal of planking or metal decking, all employees must be instructed in the proper sequence of removal and safety.

**Requirements for the working area where floor openings are to be uncovered:**

- The area must be in the exclusive control of steel erection personnel and shall be barricaded to prohibit unauthorized entry.
- The floor area adjacent to the floor opening shall be barricaded or the floor opening shall be covered when not attended by steel erection personnel.
- Floor openings shall be guarded by both temporary railings and toe boards or by covers.

**Covers shall:**

- Be secured and capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time.
- Have not less than 12 in. of bearing on the surrounding structure.
- Be checked by a qualified person prior to each shift and following strong winds.
- Never be removed by walking forward where the walking surface cannot be seen.
- Bear a sign stating, "OPENING-DO NOT REMOVE", in 2 inch high, black bold letters on a yellow background.

**Permanent Flooring -Skeleton Steel Construction in Tiered Buildings**

- Unless the structural integrity is maintained by the design
- There shall be not more than eight stories between the erection floor and the uppermost permanent floor.
- There shall be not be more than four floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor.

**All columns must be anchored by a minimum of 4 anchor bolts.**

**20. Excavations**

- The employer must locate buried utilities **before** digging.
- Prior to excavation all known owners of underground facilities and utilities in the area shall be notified by calling the regional One Call Notification System.
- Employers shall check the entire Project Site for visual signs of substructures. This includes such items as manhole covers, water meter boxes, ditch lines, pavement patches, previous location marks, pole risers, and the obvious absence of overhead utilities.
- Employers shall further check the entire site by "sweeping" back and forth with a pipe locator to verify both known substructures and to pick up any unknown substructures.
- Employers must expose substructure **by hand** after locations are determined.
- Employers shall be careful that no holes or cuts are knocked into the substructure by scraping or hammering.
- Employers shall be aware of the possibility of joint use of trench for power, telephone, gas, etc.

- Employers shall obtain an activity permit from Cal/OSHA in accordance with 8 CCR § 341 and §1539.
- Employers shall Notify OSHA with Activity notification form prior to work start with an excavation of 5' or more where employees are required to enter.
- Employers shall maintain a copy of the permit onsite.
- Trenching or excavating activities must be under the supervision of a competent person at all times.
- The Employer material bracing, shoring, shielding, and trench boxes must be in good condition and of proper dimensions.
- A competent person must be on site at all times during trenching or excavation activities.
- A 'competent' employer individual must inspect excavations each day and maintain daily reports available upon request.
- The employer's competent person must determine the soil classification (Type A, B, or C) to determine the appropriate type of protective system required for the excavation.
- Excavated soils, materials or equipment are to be kept at least two feet from the edge of the excavation.
- The Employer must provide barricades to protect people from falling into the trench. Barricades shall be offset 3' from the excavation.
- Ladders or other means of egress must be provided by the employer for access 4' and greater and spaced within 25 feet of any worker inside the excavation.
- Where employees or equipment are required or permitted to cross over any excavation or trench over 6' deep and 30" wide, walkways or bridges at least 20" wide with standard guardrails shall be provided.
- Rescue equipment must be provided by the employer (full body harness and lifeline, breathing apparatus, basket stretcher) when hazardous atmospheric conditions are expected to exist.
- Employers must follow all regulations as outlined in the OCIP *Safety Standards* and all State OSHA regulations pertaining to trenching and excavating activities.

## **21. Fall Protection**

- 100% Fall Protection shall be implemented by all trades for all fall exposures of six (6) feet or more. (Exception: Work from ladders, or work around excavations, unless specified by state regulatory compliance)

- Where a fall hazard exists, efforts must be made to eliminate the hazard; provide protection against the hazard; or establish alternative methods to control/monitor the hazard.
- Rescue shall be addressed in the Employer's fall protection policies and fall protection training.

### **Training and Retraining**

Employers are required to provide training for any Employee who might be exposed to a fall hazard prior to the exposure or upon hiring. Documentation shall be maintained and available for review upon request.

Training must include an explanation of the company's fall protection policies and safe work practices with general instructions and precautions; specific instruction where required; hazard identification and correction; selection and proper use of protective devices; and maintenance of equipment. Instruction should also include correct procedures for inspecting, erecting, disassembling, and maintaining fall protection systems used; and the Employee's role in fall prevention and protection

Retraining. When the Employer has reason to believe that any affected Employee who has already been trained does not have the understanding and skill required by paragraph (a) of this section, the Employer shall retrain each such Employee. Circumstances where retraining is required include, but are not limited to, situations where:

- Changes in the workplace render previous training obsolete; or
- Changes in the types of fall protection systems or equipment to be used render previous training obsolete; or

Inadequacies in an affected Employee's knowledge or use of fall protection systems or equipment indicate that the Employee has not retained the requisite understanding or skill.

### **Methods of Fall Protection**

Methods of fall protection include:

- Guardrails and toe boards
- Covers for floor and roof openings, pits, trap-doors, and temporary floor openings.
- Personal Fall Arrest Systems.
- Personal Fall Restraint Systems.
- Positioning Device Systems.
- Safety Nets.
- Scaffold Platforms.
- Roof Warning Lines.

Fall Protection Plans, Controlled Access Zones, Safety Monitor Systems and Controlled Decking Zones are not permitted without special approvals by the Owner and OCIP Safety.

The only allowable type of body restraint system allowed will be a full body harness with a lifeline, lanyard, and deceleration device. Safety belts are not permitted for fall arrest or fall restraint.

All personal fall arrest, personal fall restraint and positioning device systems shall be labeled as meeting the requirements contained in ANSI A10.14-1991.

Personal Fall Arrest Systems shall (a) limit the fall distance to a maximum of 6 feet and (b) prohibit the Employee from contacting a lower level or structural element.

Where practicable, the anchor end of the lanyard shall be secured at a level not lower than the Employee's waist.

Lifelines and anchorages shall be capable of supporting a minimum dead weight of 5,000 pounds.

Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.

Anchorage used for attachment of personal fall arrest equipment:

Shall be independent of any anchorage being used to support or suspend platforms, and

- capable of supporting at least 5,000 pounds per Employee, or
- part of a complete personal fall protection system used under the supervision of a qualified person that maintains a safety factor of at least two (2).
- The use of non-locking snap hooks is prohibited.
- Body belts shall not be used for fall protection or fall restraint.

### **Positioning Device Systems**

- Positioning devices shall be rigged such that an Employee cannot free fall more than 2 feet.
- Positioning device systems shall be inspected prior to each use.
- Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

### **Personal Fall Restraint**

- A Personal Fall Restraint System shall not allow the Employee to fall.
- Anchorage points used for fall restraint shall be capable of supporting 4 times the intended load.
- Personal Fall Restraint protection shall be rigged to allow the movement of Employees only as far as the sides of the working level or working area.

## **22. Fire Prevention**

The employer is responsible for establishing an effective fire prevention program and ensuring that it is followed throughout all phases of the construction work.

Firefighting equipment must be:

- Freely accessible at all times
- Placed in a conspicuous location
- Well maintained

A water supply that is adequate to operate firefighting equipment must be made available as soon as combustible materials accumulate.

All firefighting equipment shall be maintained in operating condition. Defective equipment shall be immediately replaced.

Fire extinguisher use must comply with the following

Fire extinguishers must be kept fully charged, inspected monthly, and serviced annually. At least one fire extinguisher, rated not less than 2A, must be provided at each floor.

At least one fire extinguisher, rated not less than 2A, must be provided adjacent to the stairway at each floor level.

Fire extinguishers must be kept within 50 ft. of wherever more than 5 gal. of flammable or combustible liquid or 5 lbs. of flammable gas is being used.

Storage of more than 25 gallons of flammable liquids shall be in a NFPA approved storage cabinet. Not more than 120 gallons of Class I, II, or III liquids may be stored in a storage cabinet.

No smoking signs shall be posted as required by operations or material exposures.

## **23. First Aid**

Regulations concerning first aid include the following:

- A first aid kit must be provided by each employer on all Project Sites and must contain the minimum of supplies as determined by an authorized licensed physician or as listed in The Cal/OSHA Construction Safety Orders. T8 1512
- Trained personnel in possession of a current Red Cross First Aid certificate or its equivalent must be immediately available at the Project Site to provide first aid treatment.
- Each employer shall inform all of its employees of the procedure to follow in case of injury or illness.
- Emergency medical services, including a written plan, must be provided.

- Exposure to blood borne pathogens is considered a job-related hazard for construction workers who are assigned first aid duties in addition to construction work. Although construction employers are specifically exempt from certain GISO regulatory requirements, they are required to provide appropriate protection for employees who may be exposed to blood borne pathogens when providing first aid.

## **24. Flaggers**

Flaggers must be used at locations on a construction site as soon as barricades and warning signs cannot effectively control moving traffic. The employer must ensure the following:

- Flaggers must be placed in locations so as to give effective warning.
- Worksite traffic controls and placement of warning signs must now conform to the requirements of the “California Manual on Uniform Traffic Control Devices for Streets and Highways, “latest edition” (the Manual), published by Caltrans.
- Warning signs must be placed according to the “The Manual”.
- Flaggers must wear orange or strong yellow-green warning garments, such as vests, jackets, shirts, or rainwear.
- The employer shall select the proper type (class) of high visibility safety apparel for a given occupational activity by consulting the Manual, apparel manufacturer, ANSI/ISEA 107-2004, Appendix B or the American Traffic Safety Services Association (ATSSA).
- Flaggers shall wear warning garments manufactured in accordance with the requirements of ANSI/ ISEA 107-2004, High Visibility Safety Apparel and Headwear.
- During the hours of darkness:
  - The flagger shall be clearly visible to approaching traffic and be outfitted with reflectorized garments manufactured in accordance with the requirements of the ANSI/ ISEA 107-2004, High Visibility Safety Apparel and Headwear.
  - The retroreflective material shall be visible at a minimum distance of 1,000 feet.
  - During snow or fog conditions, only colored vests, jackets and/or shirts with retroreflective material that meets the ANSI/ISEA and the minimum distance requirements shall be worn.
- Flaggers must be trained.
- Training must be documented in accordance with the (Injury and Illness Prevention) IIP Program requirements.

## **25. Flammables and Combustibles**

Flammable and combustible liquids include gasoline, paint thinners, solvents, etc.



- These liquids must be kept in closed containers when not in use.
- Leakage or spillage must be disposed of promptly and safely.
- Flammable and combustible liquids may be used only where no open flames or sources of ignition exist
- All containers of flammable and combustible liquids must be plainly marked with a warning legend.
- Flammable liquids must not be used:
  - To wash floors, structures, or equipment except where there is adequate ventilation
  - To spray for cleaning purposes unless the liquids are used in a spray booth or outdoors where there is no ignition source within 25 ft. of their use
- Flammable liquids must be stored and transported in closed containers.
- Only approved metal safety cans will be allowed for flammable storage
- All outside storage areas must be at least 20 feet from any building.
- No more than a one-day supply of flammables may be placed on the roof during working hours.
- All flammables must be removed from the roof at the end of each workday by the General Contractor.
- At least two extinguishers appropriate for the type of flammable materials present shall be provided if flammables are present.

## **26. Forklifts**

- Industrial trucks such as forklifts shall be designed, constructed, and maintained in accordance with the applicable standards.
- The employer shall establish and enforce a system to prevent trucks, trailers or railcars from pulling away from the loading dock before the loading or unloading operation is completed. Trucks, trailers, and railcars boarded by forklifts during loading dock operations shall be secured against unintended movement.
- The rated lifting capacity of the forklift must be posted in a location readily visible to the operator.
- Elevating employees requires the following:
  - The forklift must be equipped with a platform not less than 24" x 24" in size.
  - The platform must be properly secured to the forks or the mast.
  - The platform must be equipped with guardrails, toe boards, and a back guard.
  - It must have no spaces or holes larger than 1 in.

- It must have a slip-resistant platform surface.
- The operator must be at the controls while the employees are elevated.
- The operator must be instructed in the operating rules for elevating employees.
- Employees shall not sit, climb, or stand on platform guardrails or use planks, ladders, or other devices to gain elevation.
- When guard rails are not possible personal fall protection is required.
- Manufacturers specifications regarding personal being elevated and equipment used must be followed at all times.
- All forklifts must have parking brakes.
- All forklifts must have an operable horn.
- When the operator is exposed to the possibility of falling objects, the forklift must be equipped with overhead protection (canopy).
- When provided by the industrial truck manufacturer, an operator restraint system such as a seat belt shall be used.
- Seat belt assemblies shall be provided and used on all equipment where rollover protection is installed.
- The employer must post and enforce a set of operating rules that include the following:
  - Only trained and authorized drivers may operate forklifts.
  - Stunt driving and horseplay are prohibited.
  - Employees must not ride on the forks.
  - Employees must never be permitted under the forks (unless forks are blocked).
  - The driver must inspect the vehicle once during a shift.
  - The operator must look in the direction of travel and must not move the vehicle until all persons are clear of the vehicle.
  - Forks must be carried as low as possible.
  - The operator must lower the forks, shut off the engine, and set the brakes (or block the wheels) before leaving the forklift unattended (that is, when the operator is out of sight of the vehicle or 25 ft. away from it).
  - Trucks must be blocked and brakes must be set before a forklift is driven onto the truck bed.
  - Extreme care must be taken when tilting elevated loads.
  - The forklift must have operable brakes capable of stopping it safely when it is fully loaded.
- An employee must be properly trained (as certified by the employer) before operating a forklift.
  - An evaluation of the operator's performance must be conducted at least once every three years.
  - Refresher training in relevant topics must be provided to the operator when:
    - The operator is observed operating the vehicle in an unsafe manner.
    - The operator has been involved in an accident or near-miss incident.

- The operator's evaluation reveals that he or she is not operating the truck safely.
- The operator is assigned to drive a different type of truck.
- Changes in workplace conditions could affect safe operation of the truck.

## **27. Forms, False Work and Vertical Shoring**

By definition concrete forms are considered false work. False work, however, also includes support systems for forms, newly completed floors, bridge spans, etc., that provide support until appropriate curing or stressing processes have been completed.

### **Design of false work**

- a. Concrete formwork and false work must be designed, supported, and braced to safely withstand the intended load.
- b. False work design, detailed calculations, and drawings must be signed and approved by an engineer (Ca PE) if the false work height (sill to soffit) exceeds 14 ft., if the individual horizontal span length exceeds 16 ft., or if vehicle or railroad traffic goes through the false work.

**Note:** For other false work, approval may be provided by a manufacturer's representative or a licensed contractor's qualified representative.

- c. False work plans must be available at the Project Site.

Minimum design loads are as follows:

- Total combined live and dead load: 100 psf
- Live load and formwork: 20 psf
- Additional loads must be considered in the design.

### **Erection of false work**

- False work must be erected on a stable, level, compacted base and supported by adequate pads, plates, or sills.
- Shore clamps (metal) must be installed in accord with manufacturer's instructions.
- Inspection  
Before pouring concrete on false work requiring design approval, an engineer (CaPE) or the engineer's representative must inspect for and certify compliance with plans.

**Note:** For other false work, the inspection and certification may be provided by a manufacturer's representative or a licensed contractor's qualified representative.

- A copy of the inspection certification must be available at the Project Site.
- Access to forms and false work
- Joists (5 1/2 in. wide) at not more than 36 in. o.c. may be used as walkways while forms are placed.
- A plank (12 in. wide) may be used as a walkway while joists are placed.
- Fall protection

- Periphery rails are required as soon as supporting members are in place.

**Note:** The area under formwork is a restricted area and must be posted with perimeter warning signs.

## 28. Guardrails

Guardrails must be installed at the open sides of all work surfaces that are 6 ft. or higher above the ground, floor, or level underneath, or workers must be protected by other fall protection or, if justified, by a valid fall protection plan.

### **Guardrailing specifications**

Railings shall be constructed of wood or in an equally substantial manner from other materials, and shall consist of the following:

- A wooden top rail that is 42 in. to 45 in. high and that measures 2 in. x 4 in. or larger A mid-rail shall measure at least 1 in. x 6 in., and shall be placed halfway between the top rail and the floor when there is no wall or the parapet wall is less than 21 in. high
- Screens, mesh, intermediate vertical members, solid panels or equivalent members, may be used in lieu of a midrail subject to the following:
- Screens and mesh shall extend from the top rail to the floor and along the entire opening between top rail supports.
  - The gap between the intermediate vertical members shall not be greater than 19 in.
  - Other intermediate members such as solid panels shall not have gaps more than 19 in.
  - Wood posts shall be not less than 2 in. by 4 in. in cross section, spaced at 8-foot or closer intervals

**Notes:** Use only "Selected lumber" - free from damage that affects its strength for wood railings. Steel banding and plastic banding shall not be used as top rails or mid-rails.

- All railings and components shall be capable of withstanding a force of at least 200 pounds applied to the top rail within 2 in. of the top edge, in any outward or downward direction, at any point along the top edge.
- Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent members shall be capable of withstanding a force of at least 150 pounds applied in any downward or outward direction at any point.
- The ends of the rails shall not overhang the terminal posts, except where such overhang does not constitute a projection hazard.
- Railings shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.

### **Guardrailing applications**

- Floor and roof openings:
- Floor, roof, and skylights openings in any work surface must be guarded by railings and toe boards or by covers.
  - a) The cover must be able to support 400 pounds or twice the weight of the employees, equipment, and material, and be securely fastened.

- b) Covers must bear a sign; with minimum 1 inch letters, stating - **OPENING - DO NOT REMOVE.**
- c) Employees within 6 feet of any skylight shall be protected from falling through the skylight opening by any one of the following methods:
  - Guardrails
  - Skylight screens.
  - Personal fall protection system.
  - Covers installed over the skylights.
  - Fall protection plan.
  - Access to surfaces glazed with transparent or translucent materials are not permitted unless an engineer certifies that the surface will sustain all anticipated loads.
  - Wall openings: Wall openings must be guarded if there is a drop of more than 4 ft. and the bottom of the opening is less than 3 ft. above the working surface.
    - Elevators: Guardrails are required for elevator shaft openings that are not enclosed or do not have cages.
    - False work: Guardrails are required as soon as false work-supporting members are in place.
    - Demolition: Wall openings must be guard-railed during demolition except on the floor being demolished and on the ground floor.
    - Roofing operations: Provisions must be made during roofing operations to prevent workers from falling off roofs 6 ft. or higher.
    - Skeleton steel building: A single 3/8-in. wire rope, in lieu of standard railing, may be used to guard openings and exposed edges of temporary floors or planking in skeleton steel buildings. The 3/8-in. wire rope must have a breaking strength of 13,500 lbs. (min.) and be placed at 42 in. to 45 in. above the finished floor.

## **29. Hazard Communication**

The General Contractor shall maintain (a) a copy of all Material Safety Data Sheets and or Safety Data Sheet, and (b) a chemical inventory list, for all hazardous substances used at the jobsite by their firm, as well as for all hazardous substances used at the jobsite by all Subcontractors regardless of tier.

The location of the Project's Material Safety Data Sheets/Safety Data Sheets and chemical inventory list shall be communicated to the Authorized Representative and OCIP Safety.

In accordance with the provisions of the Hazard Communication Standard, each Employer must have a comprehensive written Hazard Communication Program which includes:

- A list of hazardous substances known to be on site.
- Methods the Employer will use to inform Employees of the hazards of non-routine tasks.
- On Multi- Employer Project Sites, the program shall include the methods Employer s will use to inform other Employers of any precautionary measures to protect their Employees.

- The methods used to provide other Employer (s) with access to Material Safety Data/Safety Data Sheets.
- The methods the Employer will use to inform the other Employer (s) of the labeling system in use.
- The General Contractor and all Subcontractors must submit a copy of its Hazard Communication Program to the Authorized Representative and CSR.

Each Employer must have a Project Site binder which contains the following items:

- A comprehensive written Hazard Communication Policy.
- A chemical inventory listing all hazardous materials brought onto or used on the Project Site by the Employer.
- Material Safety Data Sheets (MSDS's)/Safety Data Sheets (SDS's) for all hazardous materials used on the Project Site.

The Employer shall ensure that all Employees have received training in the safe use of hazardous materials; and that Employees are able to read and understand the information on MSDS/SDS. The training shall include at least:

- Methods and observations that may be used to detect the present or release of a hazardous chemical.
- The physical and health hazards of the chemicals used in the work area.
- Measures Employees can take to protect themselves from the hazards.
- Details of the hazard communication program, including the labeling systems and the use of MSDS/SDS's.

The Employer shall ensure that all containers used on the construction site are properly labeled as to their contents, including gas and diesel containers.

The Employer will provide a Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for any hazardous substance that will be used on the Project Site to the General Contractor prior to its use.

### **30. Heat Illness Prevention**

Heat illness is a serious medical condition resulting from the body's inability to cope with increased heat load. Heat illness can be one or more medical conditions including: Heat Rash, Heat Cramps, Fainting, Heat Exhaustion, and Heatstroke. Heat Illness may be mild initially but can become severe or fatal if the body temperature continues to rise. Heat illness can also affect employees work performance and increase their risk of having accidents. Supervisors, Foremen and employees should look continuously for signs and symptoms of Heat Illness in themselves and fellow workers. It is vital to immediately report any signs and symptoms of Heat Illness to a supervisor. There is a lot of variability in the recognition and reporting of heat illness symptoms.

To help employers develop, implement, and monitor their heat illness prevention procedures, CAL/OSHA has provided a number of materials including:

<http://www.dir.ca.gov/DOSH/HeatIllnessInfo.html>

Signs and symptoms of Heat Illness are:

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- *Heat Rash (Prickly Heat)* - a skin irritation caused by excessive sweating and clogged pores during hot, humid weather.
  - General Symptoms:
    - Can cover large parts of the body
    - Looks like a red cluster of pimples or small blisters
    - Often on the neck, chest, groin, under the breasts, or in elbow creases
    - Uncomfortable, can disrupt sleep and work performance
    - Complicated by infections
- *Heat Cramps* - Heat cramps affect people who sweat a lot during strenuous work activity. Sweating makes the body lose salts, fluids and minerals. If only the fluids are replaced and not the salts and minerals, muscles cramps may result.
  - General Symptom:
    - Painful muscle spasms in the stomach, arms, legs, and other body parts may occur after work or at night
- *Fainting* - caused by a lack of adequate blood supply to the brain. Dehydration and lack of acclimatization to work in warm or hot environments can increase the susceptibility to fainting –Employees who stand for long periods or suddenly get up from a sitting or lying position when working in the heat may experience sudden dizziness and fainting. In both cases, victims normally recover consciousness rapidly after they faint.
  - General Symptoms:
    - Sudden dizziness, light-headedness
    - unconsciousness
- *Heat Exhaustion* - Heat exhaustion is the body's response to an excessive loss of the water and the salt contained in sweat. Older employees or those with high blood pressure are more susceptible to heat exhaustion. Cool skin temperature is not a valid indicator of a normal body temperature. Although the skin feels cool the internal body temperature may be dangerously high and a serious medical condition may exist.
  - General Symptoms:
    - Heavy sweating, painful muscle cramps, extreme weakness and/or fatigue
    - Nausea, vomiting, dizziness, headache
    - Body temperature normal or slightly high
    - Fainting
    - Pulse fast and weak
    - Breathing fast and shallow
    - Clammy, pale, cool, and/or moist skin
- *Heatstroke* - Heatstroke is usually fatal unless emergency medical treatment is provided promptly. If the muscles twitch uncontrollably, keep the person from self-injury. Do not place any objects in the mouth. Monitor body temperature and continue cooling efforts until emergency medical treatment is provided to the victim.
  - General Symptoms:
    - No sweating, the body cannot release heat or cool down
    - Mental confusion, delirium, convulsions, dizziness
    - Hot and dry skin (e.g., red, bluish, or mottled)
    - Muscles may twitch uncontrollably
    - Pulse can be rapid and weak

- Throbbing headache, shallow breathing, seizures and/or fits
- Unconsciousness and coma
- Body temperature may range from 102 - 104 degrees F or higher within 10-15 minutes

Employers must protect employees from Heat Illness. All employees, Foremen, and supervisors must be trained on the employer's heat illness prevention procedures.

All employers, having employees exposed in outdoor places of employment, must have employer and site specific heat illness prevention plan.

Heat illness prevention plan includes the following elements:

- Access to drinking water
- Sufficient amounts of cool potable water shall be available at all times.
- Provide at least one quart per employee per hour for the entire shift.
- Provide water at no cost to the workers.
- Remind workers to drink water often and not to wait until they are thirsty to drink.
- Place sufficient supplies of water as close to employees as possible given the worksite conditions and layout.

### **Shade requirements**

When the outdoor temperature:

- Does not exceed 85 degrees F, provide shade or timely access to shade upon request
- Shade required to be present when the temperature exceeds 85 degrees F. If temperature in the work area exceeds 85 degrees Fahrenheit, the employer shall have and maintain one or more areas with shade at all times while employees are present that are either open to the air or provided with ventilation or cooling.
- It is a good idea to set up the shade in advance, if at 5:00 p.m. the night before, the temperature is predicted to exceed 85 degrees F or if you want to monitor the temperature during the work hours, perform hourly checks of the temperature at the worksite on the day of work and set up the shade immediately if the temperature exceeds 85 or;
- If temperature exceeds 90 degrees F, at any time on the day of work, shade must be set up immediately
  - Place the shade structure as close as practicable to the areas where employees are working.
  - Shade area should accommodate at least 25 percent of the employees on the shift at any time.
  - Permit employees to access shade at all times.
  - Encourage employees to take a cool-down rest in the shade, for a period of no less than 5 minutes at a time.
  - May provide alternative cooling measures that offer equivalent protection.

The employer shall use high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:

- Ensuring that effective communication is maintained so that employees can contact a supervisor when necessary. An electronic device, such as a cell phone or text messaging device, may be used for this purpose only if reception in the area is reliable.



- Observing employees for alertness and signs or symptoms of heat illness.
- Reminding employees throughout the work shift to drink plenty of water.
- Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer
- Written procedures that detail how the employer will:
  - Provide access to water & shade
  - Monitor the weather
  - Institute high heat procedures and address lack of acclimatization
  - Train all employees and supervisors
  - Respond to heat illnesses without delay, provide first aid and emergency services
  - Provide clear and precise directions to the worksite
  - Emergency Response procedure that shows how the employer will:
    - Immediately respond to symptoms of possible heat illness
    - Contact emergency medical service providers
    - Provide clear and precise directions to the worksite
    - Ensure that emergency procedures are invoked when appropriate
    - Train all employees and supervisors on heat illness prevention before working outdoors in the heat.

**Note:** Training must include the importance of acclimatization, how it is developed, and how the employer's procedures address acclimatization.

The employer must provide a suitable number of trained persons to render first aid as follows:

- To give first aid for heat exhaustion, lay the person down flat in a cool environment, loosen his or her clothing, and give him or her plenty of water to drink
- To give first aid for heat stroke, immediately start aggressive cooling of the person and get him or her to a hospital right away

Ways to prevent heat illness also include:

- Monitoring weather forecast ahead of time and planning accordingly
- Timing the heaviest work load for during the coolest part of the workday
- Encouraging workers to drink water and to cool down
- Starting work shift early in the morning
- Providing training on heat stress including prevention, recognition, and first aid as a part of the employer's IIP Program.

### 31. Heavy Equipment

Safety requirements for heavy construction equipment are as follows:

- General repairs must not be made to powered equipment until workers are protected from movement of the equipment or its parts.
- Before repairs are made workers must comply with lock-out/block-out requirements if applicable.
- Wherever mobile equipment operation encroaches on a public thoroughfare, a system of traffic controls must be used.

**Flaggers** are required at all locations where barricades and warning signs cannot control the moving traffic.

Flaggers shall wear high visibility safety apparel and headwear manufactured in accordance to ANSI/ISEA standards). Also, all employees (on foot), such as grade-checkers, surveyors and others exposed to the hazard of vehicular traffic, shall wear high visibility safety apparel in accordance with the requirements of T8CCR; 1590, 1598 and 1599.

Job-site vehicles must be equipped with the following:

- Operable service, emergency, and parking brakes.
- Two operable headlights and taillights for night operation.
- Windshield wipers and defogging equipment as required (Cracked or broken windshields shall be promptly replaced)
- Seat belts if the vehicle has rollover protection structures.
- Fenders or mud flaps.
- Adequate seating if the vehicles are used to transport employees.
- Vehicles and systems must be checked for proper operation at the start of each shift.

Rollover protection structures and seat belts must be installed for the following equipment having a brake horsepower rating above 20.

- Bulldozer
- Front-end loader
- Motor grader
- Scraper
- Tractor (except side boom pipe laying)
- Water wagon prime mover

Haulage and earth moving equipment safety requirements are as follows:

- All vehicles must be equipped with an automatic backup alarm that sounds immediately on backing. (In congested areas or areas with high ambient noise which makes hearing the alarm difficult, a signal person in clear view of the operator must direct the backing operation.)
- All vehicles must be equipped with a manually operated warning device.
- Haulage vehicles in operation must be under operator control and must be kept in gear when descending grades.
- The brakes on a haulage vehicle must meet the criteria specified by the CSOs.
- Machines shall be operated at speeds and in a manner consistent with conditions of the Project.
- The control devices on a haulage vehicle must be inspected at the beginning of each shift.
- Exposed scissor points on front-end loaders must be guarded.
- Engines must be stopped during refueling.
- Lights are required for night operation.
- Vehicles loaded by cranes, shovels, loaders, and similar devices must have an adequate cab or canopy for operator protection.
- Dust control is required when dust seriously limits visibility.
- In dusty operations, equipment operators shall use adequate respiratory protection.
- Employers shall ensure appropriate hearing protection is provided and used when Needed.
- Loads on vehicles must be secured from displacement.

### 32. Housekeeping

Housekeeping is a term used to describe the cleaning of the work site and surrounding areas of construction Project-related debris.

The term also refers to the managing and storing of materials that are used on the Project. Listed below are the general requirements for housekeeping to which all work sites are subject

Work surfaces, passageways, and stairs shall be kept reasonably clear of scrap lumber and debris. (All exits and access ways must be kept unobstructed)

- Ground areas within 6 ft. of buildings under construction shall be kept reasonably free of irregularities.
- Storage areas and walkways on construction sites shall be kept reasonably free of dangerous depressions, obstructions, and debris.
- Piled or stacked material shall be placed in stable stacks to prevent it from falling, slipping, or collapsing.
- Material on balconies or in other similar elevated locations on the exteriors of buildings under construction shall be placed, secured or positively barricaded in order to prevent the material from falling

Metal containers with covers must be provided for disposal of oily and paint soaked tags.

Individual employers are responsible for all debris or construction materials generated by their work process all such material must be maintained in an orderly fashion at all times on while on site.

### 33. Injury and Illness Prevention Program

An Injury and Illness Prevention (IIP) Program is required at all work sites. The program is considered effective if it satisfies the regulatory requirements of T8 3203 and helps the employer and the employee to identify and control the hazards specific to their work site. Following is a summary of the regulatory requirements.

A. The IIP Program must be in writing and must include the following elements:

1. The employer's assignment of responsibilities.
2. A system for ensuring employee compliance with safe work practices.
3. A system for two-way communication between employers and employees about safety issues.
4. Scheduled inspections and an evaluation system to identify hazards.
5. An accident investigation process.
6. Procedures for correcting unsafe and unhealthy conditions.
7. Safety and health training.
8. Recordkeeping.

B. Other IIP Program requirements for construction are:

1. Employers must adopt and post a Code of Safe Practices at each Project Site. Plate A-3 in Appendix A of the CSOs illustrates a general format.

2. Periodic meetings of supervisors must be held to discuss the safety program and accidents that have occurred.
3. Supervisors must conduct tailgate or toolbox safety meetings at least every ten working days; however, weekly meetings are recommended.

C. Required safety training for employees includes:

1. New workers shall be instructed in safe work practices, job hazards, and safety precautions and shall be required to read the Code of Safe Practices.
2. The employer shall permit only qualified or experienced employees to operate equipment or machinery.
3. Workers shall be instructed in the following:
  - a) The recognition of Project Site-specific hazards
  - b) Procedures for protecting themselves
  - c) First aid procedures in the event of injury

### 34. Ladders

#### Portable Ladders

Inspection and maintenance requirements are below:

- Ladders shall be inspected by a **Qualified Person** for visible defects frequently and after any occurrence that could affect their safe use.
- Ladders shall be maintained in good condition at all times.
- Metal ladders shall not be exposed to acid or alkali materials that are capable of corroding the ladder and reducing the ladder's strength, unless recommended otherwise.
- Remove ladders that have developed defects such as broken or missing steps, rungs, cleats, safety feet, side rails, or other defects from service, and tag or mark them with "Dangerous, Do Not Use".
- All ladders shall be free of oil, grease, or slippery materials. Wood ladders shall not be painted with other than a transparent material.

Prohibited uses of portable ladders are given below:

- Ladders shall not be used as a brace, skid, guy or gin pole, gang-way, or for uses they were not intended, unless recommended by the manufacturer.
- Do not place planks on the top cap.
- Step ladders shall not be used as single ladders or in the partially closed position.

To safely use portable ladders employees must also follow the requirements noted below:

- Portable ladders shall not be overloaded when used.
- The base of ladders shall be placed on a secure and level footing. Ladders shall not be placed on unstable bases.
- Ladders shall not be used on slippery surfaces unless slippage is prevented.
- The top of non self-supporting ladders shall be placed with two rails supported equally, unless a single support attachment is provided and used.
- Non self supporting ladders shall, where possible, be used so that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder.

- The ladder shall be so placed as to prevent slipping, and shall be tied, blocked, held, or otherwise secured to prevent displacement.
- Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds unless designed for such use.
- When two or more separate ladders are used to reach an elevated work area, the ladders shall be offset with a platform or landing between the ladders.
- Extend ladder side rails to at least 3 ft. above the landing unless handholds are provided.
- Do not tie ladders together to provide longer sections unless the ladders are designed for such use and equipped with the necessary hardware fittings.
- Extension ladders shall be erected so that the top section is above and resting on the bottom section with the rung locks engaged.
- Do not place ladders in passageways, doorways, driveways, or any location where they may be displaced unless protected by barricades or guards.
- Climb or work with the body near the middle of the step or rung and do not overreach from this position. To avoid overreaching, the employee shall descend and reposition the ladder.
- Employees shall be prohibited from carrying equipment or materials which prevent the safe use of ladders.
- Face the ladder while climbing and descending, and maintain contact with the ladder at three-points at all times.
- Do not stand and work on the top three rungs of a single or extension ladders.
- Employees shall not stand on the topcap or the step below the topcap of a stepladder.
- Do not use the X-bracing on the rear section of a stepladder for climbing unless the ladder is so designed and provided with steps for climbing on both front and rear sections.
- Ladders shall not be moved or extended while occupied
- Non-conductive ladders shall be used in locations where the ladder or user may contact unprotected energized electrical conductors or equipment. Conductive ladders shall be legibly marked with signs reading "CAUTION-- DO NOT USE AROUND ELECTRICAL EQUIPMENT," or equivalent.
- The area around the top and bottom of a ladder shall be kept clear.
- Job made ladders shall be constructed in accordance with Cal/OSHA Specifications
- Type II (Commercial) and Type III (Household) ladders are prohibited

<u>Duty Rating</u>	<u>Ladder Type</u>	<u>Working Load (Pounds)</u>
Special Duty	IAA	375
Extra Heavy-	Duty IA	300
Heavy-	Duty I	250
Medium-	Duty II	225
Light-	Duty III	200

### **35. Laser Equipment**

The primary hazard of using laser equipment is injury to the eyes. Following are selected regulatory requirements:

- Only qualified persons may operate laser equipment.
- Equipment must be turned off or shielded when unattended and not in use.

- Laser beams must never be pointed or directed at persons.
- Lasers must have a label indicating their maximum output.
- Employees who have a potential exposure to direct or reflect laser light greater than 5 mill watts shall be provided with anti-laser eye protection as specified in Section T8 3382(e).
- Warning signs and labels (in accordance with ANSI) must be posted in areas where lasers are used.

### 36. Lighting

Construction areas, ramps, corridors, offices, shops and storage areas, etc., shall be lighted to not less than the minimum illumination intensities in the following table while work is in progress:

#### Minimum Illumination Intensities in Foot-Candles

##### *Foot-Candles Area or Operation*

- |         |   |
|---------|---|
| 10..... | General construction area lighting low activity.  |
| 10..... | Outdoor active construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling, and field maintenance areas.  |
| 10..... | Indoors: warehouses, corridors, hallways, stairways, and exit-ways.   |
| 10..... | General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active storerooms, barracks or living quarters, locker or dressing rooms, mess halls and indoor toilets and workrooms). |
| 10..... | Nighttime highway construction work.  |
| 30..... | First-aid stations, infirmaries, and offices.   |

Nighttime highway construction work lighting shall be provided within the work zone to illuminate the task(s) in a manner that will minimize glare to work crews and not interfere with the vision of oncoming motorists.

### 37. Lockout/Tagout

When equipment needs to be de-energized during cleaning, servicing, or adjusting operations the following applies:

- Machinery or equipment capable of movement shall be stopped, and the power source shall be de-energized or disengaged.
- Moveable parts shall be mechanically blocked or locked out.
- Equipment that has lockable controls or that is readily adaptable to lockable controls shall be locked out or positively sealed in the off position.
- Accident prevention signs or tags shall be placed on the controls of equipment, machines, and prime movers during repair work.
- An energy control procedure shall be developed and used by the employer.
- If the equipment must move during repair or maintenance, the employer shall provide and require the use of extension tools or other means to protect employees from injury due to the movement. Employees shall be trained on the safe use and maintenance of such tools or means.
- Repairs on Heavy Construction equipment must not be made until workers are protected from movement of the equipment or its parts.

An authorized person shall be responsible for the following before working on de-energized electrical equipment or systems unless the equipment is physically removed from the wiring system:

- Notifying all involved personnel.
- Locking the disconnecting means in the "open" position with the use of lockable devices, such as padlocks, combination locks or disconnecting of the conductor(s) or other positive methods or procedures which will effectively prevent unexpected or inadvertent energizing of a designated circuit, equipment or appliance.

### **38. Machine Guarding**

Machine guarding is required on all moving machine parts when the operation of a machine or accidental contact with the parts could injure the operator or other workers.

The following are some of the major moving machine parts that must be guarded:

- Gears, sprockets, and chain drives.
- Belt and pulley drives.
- Belt conveyor head and tail pulleys.
- Screw conveyors.
- Exposed shafts and shaft ends
- Collars and couplings.
- Hazardous revolving or reciprocating parts.

### **39. Personal Protective Equipment**

- Employers are required to assess the workplace to determine if hazards that require the use of personal protective equipment are present or are likely to be present.
- Employers must certify in writing that a workplace hazard assessment has been performed.
- Employers must select and have affected employees use properly fitted personal protective equipment (PPE) suitable for protection from existing hazards.
- Employees must, at all times unless otherwise directed, wear an approved hard hat on the Project Site.
- Employers must supply all personal protective equipment.
- Employees working in locations where there is risk of receiving eye injuries, such as punctures, abrasions, contusions, or burns, shall be safeguarded by means of appropriate eye or face protection.
- All safety glasses, goggles, and face shields must have the ANSI-Z87 approval. Safety glasses with permanently affixed side shields are required at all times.

- Safety eyewear manufactured to meet or exceed the requirements of ANSI Z87. 1-2003 must provide High Impact protection.
- Sturdy work boots are required at all times on the Project Site or appropriate work shoes
- At minimum a Class II High Visibility reflective vest shall be worn at all times while on site.
- Respiratory, hearing, face, skin, and hand protection are required for any applicable areas on the Project Site.
- Employees who are required to wear respiratory protection must receive a medical assessment of their physical ability to wear the equipment, be properly fit tested, and be trained in the use, care, maintenance, and limitations of the respiratory device.
- Employees on the Project Site shall not wear tennis shoes, running shoes, casual street shoes, sandals or shoes made of other thin material. Sturdy work boots are required.
- Shirts must have a minimum 4" sleeve (No Tank Tops or Shirtless attire), Shorts are not allowed.
- Proper professional work attire must be worn at all times.

#### 40. Public Protection Plan

The General Contractor shall develop a Public Protection Plan prior to the commencement of work. The Plan shall be reviewed and revised as necessary throughout the Project.

The plan shall be in writing and available at the jobsite for review upon request

Public refers to parties not involved with the execution of work related to this Project.

#### 41. Ramps and Runways

Regulations concerning ramps and runways are as follows:

##### **General requirements**

- Ramps must be properly designed to provide a safe means of access for foot or vehicle traffic.
- Open sides of ramps that are 6 ft. or more above ground must have standard guardrails.

##### **Foot ramps**

- Foot ramps must be at least 20 in. wide and must be secured and supported to avoid deflection or springing action.
- If the ramp slope exceeds 2 ft. of rise for every 10 ft. of run, cleats must be 8 in. or more in length and must be placed not more than 16 in. apart.



## Wheelbarrow ramps and runways

- Wheelbarrow ramps and runways must be firmly secured against displacement.
- Ramps more than 3 ft. high must be 30 in. wide, and planks must be firmly cleated together.
- Falsework design loads must be increased by 10 psf for worker-propelled carts.

## 42. Scaffolds

### General requirements

- Scaffolds must be provided for work that cannot be done safely by employees standing on ladders or on solid construction that is at least 20 in. wide.  
**Exception:** A 12-inch wide plank on members that are on 24 inch (or closer) centers is permitted.
- The design and construction of scaffolds must conform to applicable standards and requirements. 1637, ANSI A10.8-1988, ANSI/ASSE A10.8-2001 Standards are based on stress grade lumber. Metal or aluminum may be substituted if the structural integrity of the scaffold is maintained.
- Each scaffold must be designed to support its own weight and 4 times the maximum load. Maximum working loads are as
  - Light-duty scaffolds: 25 psf of work platform.
  - Medium-duty scaffolds: 50 psf of work platform.
  - Heavy-duty scaffolds: 75 psf of work platform.
  - Special-duty scaffolds: exceeding 75 psf as determined by a qualified person or a California registered Civil Engineer with scaffold design experience.
  - Engineered scaffolds: as determined by a California registered Civil Engineer with scaffold design experience.

The erecting and dismantling of scaffolds are regulated as follows:

- Scaffold erection and dismantlement must be supervised by a qualified person.
- Scaffolds must be erected and dismantled according to design standards, engineered specifications, or manufacturer's instructions.
- A DOSH permit is required for erecting and dismantling scaffolds that exceed three stories or 36 ft. in height.
- Scaffold access: Ladders, horizontal members, and stairways must provide safe and unobstructed access to all platforms. The equipment must be located so that its use will not disturb the stability of the Scaffold:

Scaffolds must be secured as follows:

- Scaffolds must be tied off with a double- looped No. 12 iron wire or a single- looped No. 10 iron wire or the equivalent. A compression member should prevent scaffold movement toward the structure.
- Scaffold platforms must conform to the following:
  - Platforms must be capable of supporting the intended load.
  - Platforms must be planked solid (without gaps) and cover the entire space between scaffold uprights.

**Exception:** In solid planking the following gaps are permissible:

- The opening under the back railing
- Wood scaffolds: 8 in. (max) horizontal.
- Metal scaffolds: 10 in. (max) horizontal.
- Space between the building (structure) and the platform
- Wood scaffolds: 14 in.(max).
- Metal scaffolds: 16 in. (max).
- Bricklayers scaffolds: 7 in. (max) to finished face of building.

Platform minimum widths are as follows:

- Light duty: 20 in.
- Heavy trades: 4 ft.
- Platform slope must not exceed 2 ft. vertically to 10 ft. horizontally.
- Overhead protection is required when people are working overhead.
- Slippery platform conditions are prohibited.

Planking must conform as follows:

- All solid sawn planking, unless specified in other orders, must be made of scaffold grade (structural plank 2200 Psi) lumber (see 1504) with a nominal dimension of at least 2" x 10".
- Prior to being placed into service, all solid sawn wood scaffold planks shall be certified by, or bear the grade stamp of, a grading agency approved by the American Lumber Standards Committee.
- All Douglas Fir and Southern Pine planking sized 2 x 10-inch (nominal) or 2 x 9-inch (rough) shall not exceed a maximum span as follows:
  - Light trades @ 25 psf = 10 ft.
  - Medium trades @ 50 psf = 8 ft.
  - Heavy trades @ 75 psf = 7 ft.

All scaffold planks shall be visually inspected for defects before use each day.

Defective or damaged scaffold planks shall not be used and shall be removed from service.

Planking shall overhang the ledger or support as follows:

- A minimum of 6 in. A maximum of 18 in. g) A single plank (up to 4 ft. high) is only permitted on light-trade wooden pole and horse scaffolds.
- All platform planks, shall not deflect more than 1/60 of the span when loaded to the manufacturer's recommended maximum load
- Guardrails must be installed on open sides and ends of platforms that are 6 ft. or higher.

**Exception:**

- X braces that substitute for a midrail must intersect 20 in. to 30 in. above the platform.
- X-braces that substitute for a top rail must intersect 42 in. to 48 in. above the platform, and a midrail must be placed at 19 in. to 25 in. above the platform.

Toeboards are required on all railed sides of work surfaces where employees work or pass below.

Prohibited scaffolds and supports:

- a) Shore scaffolds
- b) Jack scaffolds (with brackets attached to single studs)
- c) Lean-to scaffolds
- d) Stilts
- e) Nailed brackets
- f) Brick or blocks
- g) Loose tile
- h) Unstable objects

Maximum scaffold working load must be posted or provided to and available from the jobsite supervisor.

Prohibited work practices:

- Work on or from scaffolds during storms or high winds unless:
- A qualified person has determined that it is safe and Employees are protected by a personal fall arrest system, or wind screens.  
**Note:** Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces.
- Wood platforms shall not be painted with opaque finishes, but can be coated with certain clear finishes.
- Tower and rolling scaffolds
- The specifications for tower and rolling scaffolds are as follows:
- The “height-to-base” must not exceed 3:1 unless the scaffold is secured.
- A screw jack must extend 1/3 of its length into the leg tube, and the exposed thread must not exceed 12 in.
- Two wheels, or casters, must swivel; all four must lock.
- A fully planked platform is required.
- All frame and center joints shall be locked together by lock pins, bolts, or equivalent fastenings.
- The scaffold must have horizontal diagonal bracing (see Illustration 9).
- Railings are required if the platform is 6 ft. or more above grade.
- Ladders or other unstable objects shall not be placed on top of rolling scaffolds to gain greater height.
- When scaffolds are built on motor trucks or vehicles, they must be rigidly attached to the truck or vehicle.
- Trucks or vehicles that have scaffolds attached to them shall have a device in use whenever employees are on the scaffold that prevents swaying or listing of the platforms.
- Employees may ride on rolling scaffold moved by others below if the following conditions exist:
- The floor or surface is within 3 degrees of level, and free from pits, holes, or obstructions.
- The minimum dimension of the scaffold base, when ready for rolling, is at least 1/2 of the height. Outriggers, if used, shall be installed on both sides of staging.
- The wheels are equipped with rubber or similar resilient tires. For towers 50 feet or over, metal wheels may be used.

- The manual force used to move the scaffold shall be applied as close to the base as practicable, but not more than 5 feet (1.5 meters) above the supporting surface of the scaffold.
- Before a scaffold is moved, each employee on the scaffold shall be made aware of the move.
- No employee shall be on any part of the scaffold which extends outward beyond the wheels, casters, or other supports.
- Employees may ride and move on a Self-Propelled rolling scaffold while on the platform without assistance from others below provided the following conditions are met:
  - The scaffold platform shall not be more than 4 feet above the floor level.
  - The working platform shall be no less than 20 in. in width with a maximum 1 inch space between platform planks.
  - Wheels or casters of rolling scaffolds shall be provided with an effective locking device that is used in accordance with **1646(c)** or rolling scaffolds shall be provided with an effective device that is used to prevent movement of the scaffold when workers are climbing or working on the scaffold.
- The use of power systems such as motor vehicles, add-on motors, or battery powered equipment to propel a rolling scaffold is prohibited.
- Employees who ride on rolling scaffolds and employees that assist in moving employees riding on a rolling scaffold shall be trained on the hazards associated with riding on a rolling scaffold

#### 43. Toilets/ Washing Facilities/ Sanitation

Regulations concerning toilets, hand washing, and sanitation include the following:

- Toilet facilities are required at the Project Site.
- A toilet is required for each 20 employees or fraction thereof of each sex; urinals may be substituted for half of the units.
 

**Exception:** Sites with fewer than five employees are not required to provide separate toilets for each sex; however, toilets must be lockable from the inside.
- Toilets must be kept clean and supplied with toilet paper.
- Toilets are not required for mobile crews if transportation to nearby toilets is available.
- One washing station must be provided for each 20 employees or fraction thereof.
- Washing stations must be clean and have an adequate supply of soap, water, and single use towels (or warm air blower).
- Washing station must have a sign indicating water is for washing.
- Wash stations are to be located outside and not attached to the toilet facility.
- **Exception:** Where there are less than 5 employees and only one toilet facility is required, the wash station may be located inside the toilet facility.
- An adequate supply of potable (drinkable) water must be provided at each Project Site. The employer shall take one or more of the following steps to ensure every employee has access to drinking water:
  - Provide drinking fountains.
  - Supply single-service cups.
  - Supply sealed one-time use water containers.
  - Ensure re-usable, closable containers are available for individual employee use.

#### 44. Tools and Equipment

General Requirements for Tools and Equipment Include:

- Tools must be kept clean and in good repair.
- Only trained or experienced employees may operate tools, machines, or equipment.
- Power-operated tools must be grounded or of the double-insulated type. If double-insulated types or tools are used, the equipment shall be distinctively marked.
- Power-operated tools should be kept out of wet locations.
- Guards required by the Safety Officers (SOs) must not be removed or deactivated.
- Control switches for powered hand tools are subject to the regulations noted below:
- The following tools must be equipped with a constant-contact (dead-man) on-off switch:
  - Drills
  - Tappers
  - Fastener drivers
  - Grinders
  - Disc and belt sanders
  - Reciprocating saws
  - Circular saws
  - Chain saws
  - Concrete vibrators
  - Concrete breakers
  - Concrete trowels
  - Powered tampers
  - Jack hammers
  - Rock drills
  - Tools similar to those above
- Hoisting or lowering electric tools by their cords is prohibited.
- Powder-actuated tools (PAT) shall be approved for their intended use, or have California approval numbers.
  - Only trained workers holding a valid operator's card may use a PAT.
  - Containers must be lockable and bear a label that says POWDER-ACTUATED TOOL on the outside. The storage container must be kept under lock and key.
  - Warning signs that say POWDER-ACTUATED TOOLS IN USE must be conspicuously displayed within 50 ft. of a PAT operation.
  - Misfires and skipped power charges must be stored and disposed of properly.
- Circular power saws are regulated as follows:
  - Portable Circular power saws:
    - Teeth on the upper half of the saw blade must be permanently guarded
    - Teeth on the lower half of the saw blade must be guarded with a telescopic or hinged guard
    - Saw guards must not be blocked open to prevent guards from functioning.
- Miter (chop) saws are regulated as follows:
  - With the carriage in the full cut position, a guard must enclose the upper half of the blade and at least 50 percent of the arbor end.
  - With the carriage in the full retract (raised) position, lower blade teeth must be fully guarded, and the guard must extend at least 3/4 in. beyond the teeth.

- Employers shall instruct employees to keep hands and fingers outside the area below the blade until the blade has come to a complete stop.
- Radial arm (horizontal pull) saws are regulated as follows:
  - The upper half of the saw blade and arbor ends must be completely covered.
  - An anti-kickback device must be used during ripping operations.
  - Saws must return automatically to the tables back when released.
  - Saws must have a stop provided to prevent the saw blade from passing the front edge of the table.
- Table saws are regulated as follows:
  - A hood must cover the saw to at least the depth of the teeth.
  - The hood shall automatically adjust itself to the thickness of the material being cut at the point where the stock encounters the saw blade. The hood may be a fixed or manually adjusted hood or guard provided the space between the bottom of the guard and the material being cut does not exceed 1/4 inch.
  - Table saws must be equipped with an anti-kickback device during ripping operations.
  - Push sticks or push blocks shall be provided at the work place in the several sizes and types suitable for the work to be done.

**Note:** The arbor speed of circular saw blades shall not exceed speeds recommended by the manufacturer.

- Chain saws are regulated as follows:
  - Chain saws must be equipped with a constant-pressure control that returns the saw to idling speed when released.
  - Chain saws must have a clutch adjusted to prevent the chain drive from engaging at idling speed.
- Pneumatic tools are regulated as follows:
  - Safety clips are required on pneumatic tools to prevent dies from being accidentally expelled from the barrel.
  - Pneumatic nailers and staplers must have a safety device that prevents the tool from operating when the muzzle is not in contact with the work surface.
  - Exception:** Light-Duty Nailers and Staplers
  - Pneumatic nailers and staplers must be disconnected from the air supply at the tool when performing any maintenance or repair on the tool, or clearing a jam.
  - The air hose of pneumatic nailers and staplers must be secured at roof level to provide ample but not excessive amounts of hose when an operator works on roofs sloped steeper than 7:12. . All pneumatic hoses exceeding 1/2-inch inside diameter shall have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.
  - Jack hammer operators must wear personal protective equipment when required, including foot protection. Jack hammer operators must also use hearing protection when noise levels exceed allowable exposure levels.

- All portable pipe threading/cutting machines, portable power driven augers (earth drills), and portable power drives shall be permanently equipped with a momentary contact device.

#### 45. Traffic Control

Worksite traffic controls and placement of warning signs must conform to the requirements of the “California Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition”, published by Caltrans.

Additional means of traffic control, such as continuous patrol, detours, barricades, or other techniques for the safety of employees may be employed.

- Specifications for the size and design of signs, lights, and devices used for traffic control shall be as described in the "Manual", pursuant to the provisions of California Vehicle Code Section 21400, which is incorporated by this reference.
- Employees (on foot), such as grade-checkers, surveyors and others exposed to the hazard of vehicular traffic, shall wear high visibility safety apparel in accordance with the requirements of 1598 and 1599. 1590

**Note:** The warning garments such as vests, jackets, or shirts shall be manufactured in accordance with the requirements of the ANSI/ ISEA 107-2004, High Visibility Safety Apparel and Headwear. 1598(c)

- Flaggers (see Flaggers section in this guide) are required when the controls cited above are inadequate.

**Note:** The use of one flagger under specified circumstances is also permitted.

- The employer shall select the proper type (class) of high visibility safety apparel for a given occupational activity by consulting the Manual, apparel manufacturer, ANSI/ISEA 107-2004, Appendix B or the American Traffic Safety Services Association (ATSSA).

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#### 46. Welding, Cutting and Other Hot Work

Each year numerous deaths from explosions, electrocutions, asphyxiation, falls, and crushing injuries are associated with hot work activities. These deaths from hot work often occur in confined or restricted spaces. In addition, numerous health hazards including heavy metal poisoning, lung cancer, metal fume fever, flash burns, and welders flash (burn to the eyes) are associated with exposure to fumes, gases, and ionizing and non-ionizing radiation formed or released during welding, cutting, brazing, and other hot work.

Before workers begin any hot work, the following controls must be established:

- No welding is permitted in an explosive environment.
- A written “hot work” permit is required whenever a combustible environment may exist.
- All combustible materials in the work area must be removed or shielded.
- Suitable fire extinguishers, that meet NFPA and ANSI Standards, must be provided in the work area.
- Welding blankets, curtains and pads shall be approved for their intended use.
- Employers must instruct employees on hot work safety.

Welders must be required to wear:

- Non-flammable gloves with gauntlets.
- Appropriate foot protection.

- Aprons (leather) and shirts that have sleeves and collars.
- Helmets, hoods, and face shields suitable for head protection.
- Suitable eye protection.
- Respiratory protection (as required).
  - Screens must be provided to protect the eyes of nonwelders from flash burns and ultraviolet light rays.

Gas welding is regulated as follows:

- Fuel gas and oxygen hoses must be distinguished from each other.
- Couplings must not disconnect by means of a straight-pull motion.
- Oil or grease must never come into contact with oxygen equipment.
- Oxygen from a system without a pressure regulation device must never be used.

Gas cylinders must be stored and used as follows:

- Cylinders must be protected from all heat sources.
- Cylinders containing oxygen, acetylene or fuel-gases shall not be taken into confined spaces.
- Acetylene and Fuel gas cylinders, including but not limited to welding and cutting fuel gas cylinders, shall be stored and used with the valve end up.
 

**Exception:** Fuel gas cylinders containing fuel gas used to power industrial trucks regulated by Article 25 of the GISO.
- All gas cylinders in service shall be securely held in substantial fixed or portable racks, or placed so they will not fall or be knocked over.
- Cylinders must be handled in suitable cradles, with their valve caps installed; they must never be lifted by magnet, rope, or chain.
- Cylinders must not be placed where they might form a part of any electric circuit.
- Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 ft. or by a noncombustible barrier at least 5 ft. high having a fire-resistance rating of at least one-half hour.
- Valve stem wrenches must be left in place while cylinders are in use.
- A fire extinguisher rated at least 10 B:C must be kept near the operation.
- Backflow and Flash Arrestor protection is required.

Arc welding is regulated as follows:

- Cables in poor condition must not be used; no cable may be spliced within 10 ft. of the electrode holder.
- The frames of arc welding and cutting machines must be grounded.
- Electrodes and holders that are not in use shall be protected so they cannot make electrical contact with employees or conducting objects.
- Defective equipment must not be used.
- Ventilation regulations for welding, cutting, and brazing operations require that worker's exposure(s) to hazardous fumes, gases, and vapors be reduced below PELs.

Outdoor operations:

- Respirators are required for any operation involving beryllium, cadmium, lead, or mercury. For other operations and materials, respirators are not required when natural or mechanical ventilation is sufficient to prevent exposure to airborne contaminants in excess of the PELs.



#### Indoor operations

- Respirators shall be used when local exhaust or mechanical ventilation is not feasible or able to prevent exposures that exceed specified limits.
- In enclosed spaces supplied-air respirators shall be used when local exhaust ventilation is not an effective means for preventing potentially hazardous exposures.

## ACRONYMS

Following is a list of acronyms used in this document.

ABC	Associated Building Contractors	MUTCD	Manual on Uniform Traffic Control Devices
AGC	Associated General Contractors of America	NEC	National Electrical Code
ANSI	American National Standards Institute	NFPA	National Fire Protection Association
ARM	Associate in Risk Management	NSC	National Safety Counsel
ASP	Associate Safety Professional	OCIP	Owner Controlled Insurance Program
ASSE	American Society of Safety Engineers	OSHA	Federal Occupational Safety and Health Administration
DHS	Department of Homeland Security	PPE	Personal Protective Equipment
CBP	Customs and Border Protection	PSP	Pro-Active Safety Process
CDL	Commercial Driver's License	RIMS	Risk and Insurance Management Society
CPR	Cardio Pulmonary Resuscitation	RPM	Revolutions per Minute
EPA	Environmental Protection Agency	SMS	Safety Management Systems
GVW	Gross Vehicle Weight	SSSP	Site-Specific Safety Program
HEPA	High Efficiency Particulate Air	TSA	Transportation Security Administration
JSA	Job Safety Analysis	T8	Title 8 of the California Code of Regulations
LEL	Lower Explosive Limit	UL	Underwriters' Laboratories
MSDS	Material Safety Data Sheet	USDOT	United States Department of Transportation

## APPENDIX: FORMS

**Safety Survey Form**

**Corrective Action Form**

# Safety Survey Form



**Hazard Classification / Rating**  
**Class A Hazard:** A condition or practice with substantial probability of serious injury, death, loss of body parts, permanent disability, extensive loss of structure, equipment or material  
**Class B Hazard:** A condition or practice likely to cause serious injury or illness resulting in temporary disability or property damage that is disruptive, but not extensive  
**Class C Hazard:** A condition specifically determined not to be of a serious nature, but has a relationship to safety. A condition likely to cause minor injury.

**Corrected (C):** Contractor corrected Hazard during survey  
**Non-Corrected (NC):** Contractor required to submit Corrective Action Form

**Project:**  
**Date:**  
 Inspected By: Moe Davis  
 Contractor / Subcontractor:

	Observation		C/NC		Hazard Rating		Observation		C/NC		Hazard Rating		Observation		C/NC		Hazard Rating		
	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	Observed	Not Observed	
Comp. Gases/Flammables/Combustibles																			
Competent Person																			
Confined Space																			
Cranes/Rigging/Inspections																			
Dangerous Act, Area Procedure																			
Electrical Safety - Low Voltage <600volts																			
Electrical Safety - High Voltage >600volts																			
Environmental - SWPP's																			
Excavations (Protective Systems)																			
Fall Protection																			
Fire Protection																			
First Aid/EPR																			
Forklifts/Elevating Platforms/Aerial Devices																			
Guardrails																			
HazCom																			
Heavy Construction Equipment																			
Heat Illness Prevention																			
Hot Work																			
Housekeeping																			
Ladders																			
PPE																			
Posting Requirements																			
Respiratory Protection/Use/Storage																			
Scaffolding																			
Struck By/Caught In-between/Ergo																			
Tools and Equipment																			
Traffic Control - Vehicular/Pedestrian																			
Training																			

Notes: The recent survey made of your premises and/or operations, was not intended to detect all potential causes of loss, code violations, or exceptions to good practice and does not relieve you of any of your responsibilities to identify and correct unsafe practices or conditions on the premises and in its operations. We do not assume any liability because of conducting or providing such services.

