TRANSBAY TRANSIT CENTER

Site Specific Safety Program
Revision 9

July 10, 2014

WEBCOR/OBAYASHI JOINT VENTURE
SAN FRANCISCO, CA

EXHIBIT H

Contents

Webcor/Obayashi Joint Venture Statement on Safety

It is the policy of Webcor/Obayashi Joint Venture to provide employees a safe place to work. The personal safety and health of each employee of this company is of prime importance. The prevention of accidents and injury will be given precedence over operating productivity whenever necessary. To the greatest degree possible, management will provide facilities required for personal safety and health.

Our objective is a program that will reduce the number of injuries to a minimum and to surpass the best experience of other operations similar to ours. Our goal is zero accidents and injuries.

Our policy will be implemented as follows:

- Management will continue to develop policies and procedures that will assist in the control of personal injury, property damage and losses and fleet damage. Direct and indirect costs associated with these types of losses contribute unfavorably to operating expenses. These policies and procedures will be reviewed and updated as needed.
- Safety is the direct responsibility of all personnel. Safety is of prime importance to production and quality. Everyone has the right to stop work to address safety concerns.
- Safety on the job in all company facilities and job sites is a priority. In no instance will safety become secondary to any other considerations. Any recognized safety activity or hazard will be corrected.
- It is mandatory that all personnel engaged in work on this project comply with all federal, state and local safety codes and regulations throughout the duration of their construction on this project.
- Each site will have a Supervisor available to support the safety effort.
- Each Supervisor will be assigned various levels of safety responsibility and authority.
- All employees will be held accountable for the safety policy.
- An established system of communication, measurement, and documentation exists throughout the company.
- A Safety Committee is in place to formulate and update the company safety program and policies. This committee operates under the supervision of management.

Health and Safety Communication

This Webcor/Obayashi Joint Venture project plan will be developed incrementally as trade packages are awarded and trade subcontractors are brought on board. Each trade subcontractors plan will become part of Webcor /Obayashi's overall project plan and will be submitted to the Transbay Joint Powers Authority (TJPA) as they are received.

Orientation

The Webcor/Obayashi Joint Venture training will contain required elements stipulated by Webcor/Obayashi Joint Venture Code of Safe Conduct and Work Practices.

Webcor/Obayashi Joint Venture and ClickSafety have partnered to create a web-based Contractor Safety orientation course for the Transbay Transit Center. All contractors requiring access to the Transbay Transit Center project must successfully complete the three (3) required sessions online through ClickSafety prior to working on site. This site-specific safety orientation will take approximately one (1) hour to complete the three (3) sessions:

- Webcor/Obayashi Safety Passport
- Webcor/Obayashi Click Green Construction Practice
- Webcor/Obayashi Transbay Transit Center Project

The three sessions' includes a discussion on site protocol, evacuation procedures, a description of the logistics of the site, safety expectations and requirements that employees are expected to understand and comply with while working on the premises. These sessions are available in both English and Spanish.

Subcontractors are required to provide other task specific orientations as needed.

ClickSafety - Project Fees

The fee structure for ClickSafety services is a *$100 annual fee per user.

**Prorate will apply to those that begin the training after the first quarter of the current year.*

The prorate schedule is as follows:

January – June	$100	Valid January – December
July – December	$50	Valid July 1 – December

ClickSafety – Account Setup

These steps are to assist Contractors in setting up their account, user registration and implementation of ClickSafety.

1. Access ClickSafety's Transbay Safety Passport home page at http://www.clicksafety.com/safetypassport-transbay/
2. Create a company account. Click on the *Company* tap, then on *Register Company*, follow the prompts
    a. If your Company already have an account, your Company will still need to register your existing account for this project
3. Assign the three sessions:
    a. Webcor/Obayashi Safety Passport
    b. Webcor/Obayashi Click Green Construction Practice
    c. Webcor/Obayashi Transbay Transit Center Project

4. Prepay for employee training with a credit card and create an access code
    a. Keep this access code available as your employees will be required to enter it when they register
5. Direct all employees to ClickSafety's home page to conduct their on-line orientation
6. Employee Registration:
    a. Click on the *User* tab
    b. Then on *Register For Training* tab
    c. Select *Webcor/Obayashi TransBay Terminal* from the drop down menu
    d. Enter first name, last name, last 4 digits the employees social security number (SSN)
        i. Employees user name will be the first letter of their first name and there full last name, there password is the last 4 of their SSN
    e. Select preferred language to receive training in
    f. Select your Companies name from the drop down menu
    g. Enter access code
    h. Continue
    i. The three sessions will appear in the employees screen. Please ensure all employees complete each session

ClickSafety - Contact
A ClickSafety representative is available to answer any of your questions about this program. For general information about this project or registration assistance, please contact ClickSafety Support at (925)855-SAFE (7233) ext. 629 or cshelp@clicksafety.com. ClickSafety's Account Manager is Christina Parkin, (925)208-2618, Email: cparkin@clicksafety.com.

Should you have specific questions regarding the project or safety requirements, you may contact Webcor Builders Administrative Assistance for the EHS Department Kyla Burke at (510)748-1994 or at kburke@webcor.com.

ClickSafety - Disclaimer
ClickSafety and Webcor/Obayashi Joint Venture make this training material available with the understanding that users exercise their own skill and care with respect to its use. It is the duty of each employer as specified in the Occupational Safety and Health Act of 1970 (P.L. 91-596)

> (a1) Shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
> (a2) shall comply with occupational and health standards promulgated under this Act.
> (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

Emergency Response Procedures

Webcor/Obayashi Joint Venture provides a safe and healthful work environment for all workers through progressive, proactive injury prevention planning. Job pre-planning and identification of up-coming potentially hazardous activities is supported by regularly reviewing trend analysis. Everyone on site has a

responsibility for their own safety and the safety of their work environment. If an activity is deemed unsafe workers have several ways to communicate these activities to management. Workers shall always contact their immediate supervisor and Webcor/Obayashi Joint Venture SSM if something is unsafe or an incident occurs.

Prior to starting work on this project a designated area for emergency service vehicles to enter without any delay shall be established. A current, certified First Aid/CPR/AED trained individual must be on site during work operations. All employees shall be instructed in the proper chain of command for reporting emergencies. 9-1-1 may be called at any time for an emergency by anybody on site. Each trade subcontractor and tiered subcontractor shall maintain a Cal/OSHA approved First Aid Kit on the Project at all times. An investigation will be conducted by the controlling employer's Project Management, Supervisor and SSM/DSP, under the direction of Webcor/Obayashi Joint Venture Project Management and SSM.

Reporting and documenting all accidents, incidents and near misses, is extremely important to track trends and investigate possible root causes. All on-site incidents, accidents and near misses shall be reported to Webcor/Obayashi Joint Venture Project Management and SSM immediately. All accidents resulting in industrial injuries or illnesses occurring on the jobsite will be thoroughly investigated. Completion of appropriate forms, as defined in the Incident Reporting Instruction section must be completed and submitted immediately after occurrence. Depending on the severity of the incident a Detailed Incident Analysis (DIA) may take place.

The scene shall be left *as is* for investigation purposes as well as safeguarded to ensure the safety of other nearby workers until Webcor/Obayashi Joint Venture Management Team releases it. Identification and review process of root causes shall be completed. Corrective actions, identification of persons responsible for corrective actions, and date of completion must be established. Follow up documentation verifying corrective action completion is required. Lessons learned from the DIA reviews will be shared with the project.

OSHA and the National Safety Council (NSC) define the following:

> "Accident - The National Safety Council defines an accident as an undesired event that results in personal injury or property damage.
>
> Incident - An incident is an unplanned, undesired event that adversely affects completion of a task.
>
> Near Miss - Near misses describe incidents where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred."
>
> *(osha.gov)*

Near Miss

A near miss is an unplanned event that does not result in injury or property damage.

First Aid

A first aid case is one where a person is injured requiring minor first aid treatment that does not required medical attention or prescription medication.

Minor Injuries

Minor injuries are those which require only immediate first-aid treatment and do not result in modified work or lost work days.

Major Injuries

A significant accident is where personal injury is sustained or tangible property loss is sustained, or where the event posed a significant threat of loss or personal injury. Major injuries or illness may be those which require extended medical treatment, hospitalization resulting in loss of work time, or result in death, disfigurement, or dismemberment.

In the event of a major injury, emergency vehicles shall be directed to enter the Project at a site entrance that will be determined as conditions change on the logistic map. Upon entering the project, the emergency personnel shall be directed to the exact location of the injured person/s. While awaiting arrival of the Emergency Vehicle(s), the injured shall not be moved unless he/she is in immediate danger of additional injury in his/her current location. Equipment and material involved in or responsible for the accident shall not be disturbed unless it presents an additional danger to the injured person(s).

Immediately after the accident, Webcor/Obayashi Joint Venture Management team will meet with the responsible trade subcontractor's Superintendent and/or Foremen, review the conditions, and direct the appropriate corrective action. The trade subcontractor is responsible for ensuring the injured employee/s are escorted to and from medical facilities, reporting employee/s condition to Webcor/Obayashi Joint Venture regularly and completing and submitting a copy of all required incident reports to Webcor/Obayashi Joint Venture SSM.

Persons who have sustained head injuries, major impacts, or whose injuries are the result of a fall shall be evaluated and stabilized by a professional medical personnel and provided transportation to the medical facility. Upon return from treatment, the employee shall return to work ONLY if so released in writing by the attending physician. If required by law, injury notification to OSHA must be coordinated through the Webcor/Obayashi Joint Venture Corporate Safety Director.

Within 24 hours of a major injury, Webcor/Obayashi Joint Venture shall conduct a Safety Meeting with attendance required of all jobsite personnel.

The recommended local Emergency Medical Facilities are:

St. Francis Health Center	**St. Francis Memorial Hospital**	**SF General Hospital**
24 Willie Mays Plaza	900 Hyde St	1001 Potrero Ave
San Francisco, CA 94107-2134	San Francisco, CA 94109	San Francisco, CA 94110
(415) 972-2249	(415) 353-6000	(415) 206-8000

Incident Reporting

This Section will conform to Specification Sections 01 13 40 (1.5 A thru C) 01 15 45 (1.9 A thru C) found in The Transbay Transit Center Contract Number 08-04-CMGC-000

A TJPA Representative will inform Contractors of any additional hazardous condition encountered in writing. Trade subcontractor shall respond indicating there action or disposition of the matter by returning

an annotated copy of the written communication to the TJPA Representative within three (3) days. If death, serious injury, multiple injuries or serious damages occur, the accident shall be reported at once by telephone or messenger to the TJPA as well as to the proper governing authorities. In addition, trade subcontractors shall promptly report in writing to the TJPA all accidents whatsoever arising out of or in connection with the performance of the work whether on or adjacent to the site, giving full details and statements of witnesses. Within three (3) days of occurrence, the trade subcontractor shall provide the TJPA with two (2) copies of the trade subcontractor's accident and near-miss reports.

If a claim is made by anyone against the any trade subcontractor on account of any accident, the trade subcontractor shall promptly report the facts in writing to the TJPA, giving full details of the claim. Contractor shall provide the TJPA Representative copies of any laboratory test data, and medical monitoring results for record and evaluation within three (3) days of receipt of the above information or upon the request of the TJPA Representative.

All incidents, accidents and near misses shall be immediately reported to Webcor/Obayashi Joint Venture Project Management/SSM and fully investigated. Investigation shall be completed to identify the possible contributing factors and the corrective actions. A DIA will be completed for major injuries, severe property damage and as needed per Webcor/Obayashi Joint Venture Management Team. Trade subcontractors shall complete required incident packages and return them to Webcor/Obayashi Joint Venture SSM within 24-hours.

Accident Investigation

The initial accident investigation is to be completed within 24 hours, with immediate notification of Webcor/Obayashi Joint Venture safety. Identification and review process of contributing factors of the accident, incident or near miss must be completed. Corrective actions, identification of persons responsible for corrective actions, and date of completion must be established. Follow up documentation verifying corrective action completion is required. Lessons learned from a DIA may be shared with the project, regionally and globally.

Detailed Incident Analysis (DIA)

To identify details in incidents, accidents, near misses and at-risk behavior Webcor/Obayashi Joint Venture and trade subcontractor management will be required to, within 48 hours of the incident, conduct a Detailed Incident Analysis (DIA). The DIA will analyze any accidents, incident, near misses, environmental incident, or impact to existing facilities and operations. Accident trends will be identified and plans developed to prevent additional incidents from occurring. The DIA will be performed involving at least the Webcor/Obayashi Joint Venture Manager and SSM and trade subcontractor project teams. The mission of these meetings will be to identify problem areas, develop specific action plan(s) to address contributing factors and to immediately implement corrective actions. Webcor/Obayashi Joint Venture will periodically review implemented plans for effectiveness. Lessons learned from the DIA will be shared with the project, regionally and globally.

Responsibilities for Safety & Loss Control

The objective of this Project Safety Overview (PSO) is to establish that safety and health must be addressed throughout the entire project. The prevention of accidents and protection of property are company values and are integral to our success. All safety issues shall receive active support and participation by the entire project team.

The principles of safety and loss control are intended to prevent injuries on the jobsite and to reduce the potential for damage to property and equipment. No phase of construction is of greater importance than incident and accident prevention.

Planning for safety starts with project design and continues through purchasing, fabrication and construction in all phases of the project. Practical steps will be taken to maintain an injury free environment. All trade subcontractors must accept responsibility for preventing accidents and be responsible for thorough safety and loss control training and instruction for their workers.

The primary objective of the Webcor/Obayashi Joint Venture PSO is to coordinate the elimination or reduction of risk associated with the construction of the project. Associated missions are to promote safe work practices/behaviors, prevent accidents, prevent worker injuries, prevent damage to property, and promote maximum efficiency and effect savings by reducing unplanned business interruptions.

Active participation by Webcor/Obayashi Joint Venture management, trade subcontractors, tiered subcontractors and all workers will make the program effective and successful by coordinating the participants' efforts in performing the following tasks:

- Providing a safe environment in which workers can perform high quality work.
- Using Job Hazard Analysis (JHA) as a tool to reduce injury to persons and property.
- Conduct jobsite safety audits to locate and abate unsafe work practices/behaviors and unsafe conditions.
- Protecting the public and property potentially affected by Webcor/Obayashi Joint Venture sites.
- Educating and training workers through new hire and site specific orientation and safety meetings.
- Task specific safety training.
- Personal Protective Equipment (PPE) programs.
- Immediate injury reporting and effective record keeping to maintain an up-to-date accident experience and trends analysis.
- Use of audit forms to abate deficiencies and eliminate any additional losses.

Webcor/Obayashi Joint Venture Responsibilities

Management Team

Webcor/Obayashi Joint Venture Management Team is responsible for construction management services for the Transbay Transit Center. The Management Team is also responsible for encouraging, reinforcing and modeling Webcor/Obayashi Joint Venture culture, including injury free environment initiatives, participating in the development and assessment of Environmental Health and Safety (EHS) leading indicators, reviewing and approving project corrective action/recovery plans. Furthermore the Management Team shall institute accountability when action plans and culture are not maintained and has the authority to stop any operations that pose a potential threat.

Project Manager

The Webcor/Obayashi Joint Venture Project Manager(s) are responsible for construction management services for the Transbay Transit Center as well as determining if contract documents and specifications support the project's safety missions and objectives. The Project Manager shall also monitor trade subcontractor selection process and adherence to established guidelines, conduct periodic auditing of trade subcontractor's safety plans for compliance with the Webcor/Obayashi Joint Venture 's Environment Health & Safety Procedures (EHSP), participating in pre-task planning and trade

subcontractor pre-construction safety meetings, document weekly jobsite safety audits and support Webcor/Obayashi Joint Venture SSM for obtaining corrective actions necessary to comply with Webcor/Obayashi Joint Venture EHSP. The Project Manager must be aware of loss control and public protection requirements of the project, they must participating in fact finding, Detailed Incident Analysis (DIA), and the implementation of corrective actions. Project Manager's shall promote and support our injury free culture.

Superintendent

It is the responsibility of Webcor/Obayashi Joint Venture Superintendents are to oversee safety on the jobsite. The Superintendent's EHS responsibilities include overseeing the planning and execution of all work in compliance with the Webcor/Obayashi Joint Venture EHSP and contract specifications. The Superintendent needs to be aware of loss control and public protection requirements identified in the safety specifications of the contract documents, promote and support our injury free culture and support Webcor/Obayashi Joint Venture SSM in obtaining corrective actions necessary to comply with Webcor/Obayashi Joint Venture EHSP. Furthermore, the Superintendent shall complete and review daily jobsite safety audits to ensure identified hazards are addressed in a timely manner, monitor and participate in JHA planning and shall participate in incident investigation, DIA meetings, tailgate meetings, pre-construction meetings, kick off meetings and implementation of corrective actions. Superintendents must take appropriate action to abate identified unsafe conditions and practices and document corrective actions.

Site Safety Manager

The Webcor/Obayashi Joint Venture Project Site Safety Managers (SSM) has a responsibility for the safety and health on the project. The Webcor/Obayashi Joint Venture SSM is considered to be the program administrator and has the authority delegated by Webcor/Obayashi Joint Venture Corporate EHS Department to implement and promote safety as well as setting project missions and milestones goals and reporting indicators for all project personnel. Webcor/Obayashi Joint Venture SSM manager may assign all or some of these tasks to other responsible persons as appropriate.

The SSM must help ensure that the guidelines, rules and procedures in this document are followed for site work. The SSM shall be familiar with local emergency services, help ensure that the proper steps are taken in the case of emergencies when a major event resulting in a fatality, multiple injuries, or property loss occurs. The SSM is responsible for requiring that we preserve the accident scene in an "as is" condition, including any construction equipment involved, to allow for a proper investigation. The SSM must order, if necessary, the area or piece of equipment to be stabilized to preclude further injuries or loss. Furthermore, the SSM shall notify Webcor/Obayashi Joint Venture Project Manager should an OSHA inspection be required. Should citations, warnings or safety violations be issued Webcor/Obayashi Joint Venture Management Team shall receive copies within 48 hours.

The SSM will be conducting or taking the necessary steps to help ensure that tool box/tailgate safety meetings are conducted before work startup. Additional meetings may be required for specific job tasks or site activities. Webcor/Obayashi Joint Venture SSM also must help monitor the maintenance and inspection of PPE, onsite hazards, the physical condition of site personnel, and perform daily safety audits of work site activities. Furthermore the SSM shall maintain safety files, which will include training and applicable medical certifications, environmental testing and special associated training, tool box/tailgate meeting notes and rosters, safety observation/audit reports, investigation reports including near-misses, injury summaries, required safety permits, security issues, or other safety and health documentation, as applicable.

The SSM is responsible for supporting Project Management in achieving an injury, incident and impact free environment as well as reporting all accidents and incident to the Project Manager in a timely manner as well as a responsibility for overseeing development, implementation and maintenance of the project's safety program by expediting corrective action(s) to abate any observed or potential safety exposure(s) to workers. The SSM shall continuously monitor trade subcontractor's safety performance and expedite abatement action(s) report unsafe acts and conditions and notify Webcor/Obayashi Joint Venture Project Manager and Superintendent regarding advisable corrective actions.

More duties of Webcor/Obayashi Joint Venture SSM include monitoring the subcontractor's compliance with the Webcor/Obayashi Joint Venture EHSP and to help familiarize sub-contractors and trade subcontractor Project Managers, Superintendents and Supervisors with the Webcor/Obayashi Joint Venture EHSP. These individuals must be familiar with safety and health hazards to which all workers may be exposed, as well as applicable laws, regulations and safety rules and policies and how to handle emergency situations. SSM is to help assure that all workers are trained in accordance with applicable requirements and ensure that observations, inspections, recognition, evaluations and abatement of hazards are conducted on a continuous basis. If the subcontractor does not make immediate corrections after initial notification, Webcor/Obayashi Joint Venture EHS will notify the subcontractor's Project Management in writing to make prompt corrective action to help eliminate construction safety concerns, forward copies of the written notice to Webcor/Obayashi Joint Venture Project Management and develop the direction to help resolve outstanding construction safety issues and maintain documentation of corrective actions.

The SSM is responsible for ensuring a Hot Work Permit is completed prior to hot work commencing and shall keep a log of all Permits.

Project Engineer
The Webcor/Obayashi Joint Venture Project Engineer assists the Webcor/Obayashi Joint Venture Project Manager with his/her responsibilities for construction management services for the project. This person will complete weekly jobsite safety audits, participate in pre-task planning, subcontractor pre-bid, pre-construction, and/or kick-off meetings, assist with jobsite safety startup, safety orientations, participate in fact finding, Detailed Incident Analysis (DIA), implementing corrective actions to prevent further occurrences on all injury/incident investigations and attend and/or participate in jobsite safety meetings.

Subcontractor Responsibilities

The subcontractor has overall responsibility for accident prevention and implementation of this Webcor/Obayashi Joint Venture EHSP for anyone under their control, including their respective employees, tiered subcontractors, vendors and suppliers.

Where subcontractor is not using a Site Safety Manager (SSM) the subcontractor will assign safety responsibilities to a member of their Project Management, that person(s) will be considered a Designated Safety Person (DSP). This assignment is subject to approval by Webcor/Obayashi Joint Venture Management and Webcor/Obayashi Joint Venture SSM. The subcontractor may be responsible for providing their SSM or DSP with a reliable communication method or device in order to contact Webcor/Obayashi Joint Venture Project Management and Webcor/Obayashi Joint Venture SSM during emergency response and/or other safety related communications. Although many existing hazards may be corrected through informal communications between the trade subcontractor's and tiered subcontractor's SSM or DSP with members of Webcor/Obayashi Joint Venture Project Management, all corrective actions must be documented, with copies forwarded to Webcor/Obayashi Joint Venture Project SSM.

Subcontractors will submit a copy of their companies and their tiered subcontractors company's safety program prior to beginning work. All subcontractor workers must be orientated to their company's safety program as well as to applicable sections of this Webcor/Obayashi Joint Venture EHSP. Furthermore, subcontractors and tiered subcontractors are required to incorporate the requirements of the Webcor/Obayashi Joint Venture's EHS Plan into their safety programs and safety orientation if theirs are less protective than those of Webcor/Obayashi Joint Venture.

Project Manager
The subcontractor's Project Manager is responsible for planning and monitoring all work performed in compliance with the objectives of this Webcor/Obayashi Joint Venture EHSP, trade subcontractor's safety program, federal, state and local safety and health regulations. Authorizing immediate correction of any existing construction safety-related concerns, fully supporting the SSM or DSP and cooperating with all designated project safety personnel in obtaining corrective actions necessary to comply with the Webcor/Obayashi Joint Venture EHSP. Furthermore, trade subcontractors Project Managers shall complete weekly safety audits, participate in pre-task planning and subcontractor kick-off meetings, participating in fact finding, DIA, and resolution on all injury/incident investigations as well as when requested, attend special construction safety meetings.

Superintendent/Supervision/Foremen
Responsibilities of the trade's subcontractor Superintendent/Supervisor/Foremen are the same as Webcor/Obayashi Joint Venture Superintendent/Supervisor/Foremen and they shall attend weekly contractors' safety meetings.

All supervisory personnel shall have as a minimum the OSHA 30 Hour Construction Safety training within the prior four years and possess a current CPR /First Aid and AED certification. In addition supervisory personnel shall have at a minimum 5 years' experience as a superintendent in a similar type of project.

Site Safety Manager / Designated Safety Person
Every trade subcontractor employing **40** or more workers, including their lower tier sub-subcontract employees, must provide a full-time SSM/DSP that has no other job duties and is present on the project anytime work is being performed. An additional DSP shall be required for each additional **60** workers thereafter. Subcontractor shall also provide EHS Administrative support personnel as necessary to implement their EHS program. Contractor reserves the right to determine appropriate qualifications for Subcontractor's SSM/DSP personnel, based on project demands and reserves the right to interview candidates to determine qualifications.

The SSM/DSP shall be current in First aid/CPR/AED and hold a Construction Health and Safety Technician (CHST) and OSHA 500 certificate and have three (3) years prior full time safety duty experience working on a similar type of project at a minimum. The SSM / DSP is responsible for ensuring a Hot Work Permit is completed prior to hot work commencing. The Fire Safety Manager shall keep a log of all Permits. Subcontractors SSM shall serve as technical advisors to their project management team on safety and health planning, training and problem resolution issues.

The SSM/DSP shall report all incidents and injuries immediately to Webcor/Obayashi Joint Venture Project Management and SSM. In the event of an accident or injury the trade subcontractors Project Manager and SSM shall complete and forward all claim forms; injury, liability, property damage, and the

like, to Webcor/Obayashi Joint Venture SSM immediately. The SSM shall participate in accident investigations and recommend proper courses of corrective action. When serious accidents occur, this task will be performed in conjunction with Webcor/Obayashi Joint Venture SSM and Webcor/Obayashi Joint Venture and the subcontractor Project Management or their representatives. Each SSM/DSP has the right and authority to stop any and all hazardous work activities being performed by his/her company or their subcontractors until necessary corrective actions are taken or if there is an immediate danger to lift and/or health present.

The SSM/DSP shall perform continuous safety audits of all their respective trade subcontractors and their tired subcontractors' work areas throughout the entire workday and take immediate action to eliminate all unsafe acts and/or conditions. These observations, along with corrective actions taken shall be reported in writing to the appropriate member of Webcor/Obayashi Joint Venture Project Management, SSM and the subcontractor's own management. The SSM/DSP shall ensure that prior to the commencement of any work activity every Supervisor/Foreman reviews each task assignment with every affected employee to ensure a comprehensive understanding of the safety requirements and precautions to be followed while performing this work. This shall be documented using a JHA. The SSM/DSP shall ensure that appropriate PPE is provided and its use enforced, ensure that all of the necessary guards are in place, safety equipment is provided, and other required steps are taken prior to starting the work.

The SSM / DSP shall attend and participate in required safety meetings. The SSM / DSP shall provide appropriate materials for those conducting weekly tool box/tailgate meetings or safety meetings, as well as, review safety meeting reports for attendance and implement required safety training programs for subcontractor employees and supervisors. The SSM / DSP shall enforce their company's safety program and disciplinary procedures, accompany Webcor/Obayashi Joint Venture's supervisory personnel as directed and perform joint inspections of work areas and activities, orient all new personnel to the site's safety program prior to work commencement and the SSM/DSP are subject to Webcor/Obayashi Joint Venture's approval and may be removed at any time with or without cause and replacement personnel shall be provided at the subcontractor's / employer's expense.

Everyone's Responsibilities

Everyone has the ability to stop work for safety reasons. Everyone shall report injuries, near misses, unsafe acts and conditions immediately to supervision. Everyone shall work according to good safety practices as posted, instructed and discussed. Everyone shall comply with Webcor/Obayashi Joint Venture EHSP and subcontractor's safety program. The use of all required safety devices shall be used. Everyone shall come to work alert and free of any impairment that may affect safety. Everyone is to keep their work areas clean and orderly as well as promote and support the Injury Free Environment. Everyone agrees to be held accountable for your safety, and the safety of others. Furthermore, everyone is held accountable for their designated assignments of responsibilities as denoted in their respective definitions. Refrain from performing any work which may feel unsafe or for which proper equipment and/or training have not been provided. Everyone has the right to stop work when an unsafe condition or act occurs.

Weekly Safety Meetings

Trade subcontractors and tiered subcontractors are required to hold Weekly Safety "Tool Box" Meetings with their field crews. Copies of the meeting minutes and attendees shall be submitted to Webcor/Obayashi SSM at the end of each week. Webcor/Obayashi Joint Venture may provide assistance and information to trade subcontractors and their tiered subcontractors as requested.

In addition, subcontractors and tiered subcontractors are to attend monthly or whenever determined by Webcor/Obayashi Joint Venture all hands safety meeting.

Pre-Task Planning

Pre-planning tasks has been proven to reduce incident and accidents. All workers engaged in a specific task are required to participate in pre-planning activities. Every worker has the right to stop work and contact management if unsafe acts or conditions occur.

Job Hazard Analysis (JHA) Guidelines

A JHA is to be conducted daily, led by the Supervisor of the crew, documented in writing and signed by all crew members prior to starting work. JHA's shall include hazards relating to the task being done and the plan of actions the crew shall take to mitigate that hazard from occurring.
The JHA shall be readily available at the work site and posted and/or placed where crew members have knowledge of its location at the work area. JHA's should be reviewed and revised whenever work conditions or crew membership change that may affect the ability to safely complete the work.

A JHA is required for the following activities (at a minimum):

• Chemicals: hazardous & irritant	• Concrete: pre-cast, tilt up, vertical, form work
• Confined Space	• Hoisting & Rigging activities
• Demolition	• Framing activities
• Excavation & Trenching	• Fall Hazards: elevated work, overhead work
• Material Handling	• Non-routine activities
• Public Exposure	• Scaffolding
• Steel Erection	• Startup/Shut down/ System testing
• Working with hazardous materials	• Introducing chemicals into systems

Safety & Health Training/Information

This Section will conform to Specification Section 01 15 45 (1.10A) found in The Transbay Transit Center Contract Number 08-04-CMGC-000

Trade subcontractors and their tiered subcontractors shall maintain, on-site, all training records in accordance with federal, state, and local statutes, regulations, and policies, and provide copies of these records to Webcor/Obayashi Joint Venture Management and the TJPA upon request.

New workers will be provided with initial training and/or orientation prior to assignment or when assigned to a new task for which training has not been received. Training will include general area and specific assignment topics. Refresher training will be provided in accordance with Federal/State OSHA guidelines. Completed training records are to be submitted to Webcor/Obayashi Joint Venture SSM in a timely manner. Supervisors are expected to be knowledgeable and informed on hazards and safe work practices in their area of responsibility and to coordinate the disbursement of this information to crews.

Training may include, but not be limited to:

• Aerial / Boom Lifts	• Asbestos awareness
• Confined Space	• CPR / 1ST aid / AED
• Electrical	• Excavation & Trenching

• Fall Protection	• Fire Watch
• Forklift	• Hazard Communication
• Hazardous Chemicals	• Ladder
• Lasers	• Lead Awareness
• Lockout / Tagout (LOTO)	• Powder Actuated Tools
• Respirator Protection	• Rigging
• Scaffolding: Use & Erection / Dismantle	• Steel Erection
• Job Hazard Analysis	• Accident Investigation (Management)

Code of Safe Conduct and Work Practices

The following Safety Procedures will be complied with on the Transbay Transit Center project**.** These Safety Procedures are in accordance with Webcor/Obayashi Joint Venture Safety Program, the TJPA and the division of Industrial Safety Cal/OSHA Construction Safety Orders.

General

All subcontractors must submit their Company's Project Safety Program to the Project Site Safety Manager (SSM) prior to the start of their work. As a minimum, the subcontractor's Safety Program shall meet or exceed Webcor/Obayashi Joint Venture safety requirements, the applicable parts of the Webcor/Obayashi Joint Venture Corporate Safety Manual, the contract documents and federal, state, local or other applicable regulations.

Prior to trade subcontractors arrival, measures to identify, monitor and control the workers and the general public from identified hazards shall be included in their safety plans. The Program shall be reviewed by the Webcor/Obayashi SSM who may require additional written Safety Procedures and training records as may be necessary to address the potential hazards of the operations.

Personal Protective Equipment (PPE)

All persons entering the work area shall wear the proper PPE at all times.

Hardhats

All persons entering the work area on this project are required to wear ANSI Z89.1 approved hardhats. 100% hardhats use is required at all times while on this project. Any person refusing to wear a hardhat will be immediately dismissed from the project site. Metal hardhats and "Cowboy" hardhats are not allowed to be worn.

Eye Protection

The wearing of eye protection will be strictly enforced at all times. 100% safety glasses use is required at all times while on the project. ANSI approved prescription glasses with side shield are acceptable as well as ANSI approved goggles.

Hearing Protection

Each trade subcontractor shall provide and enforce the use of hearing protection for all workers exposed to noise levels exceeding 85 decibels (db). Where hearing protection is required, signs stating so shall be posted.

Hand Protection
Hand protection must be worn 100% of the time in any situation where hand/finger exposure to hazards exists, unless the manufacture of the equipment/material being used states gloves should not be worn. Supervisory Positions, Visitors, and Observers of work are not required to wear hand protection 100% of the time as they are not performing work, but must have gloves readily available in case a situation where hand/finger exposure to hazards arises.

Clothing & Foot Protection
All personnel shall wear safety vests, work boots or acceptable work shoes while employed on this project and keep their clothing and footwear in good condition at all times. Long pants and shirts with "T-shirt-length sleeves or longer shall be worn at all times. No sneakers, tennis shoes, soft-suede/canvas hiking boots, shorts, tank tops, tattered clothing etc., will be allowed.

Additional foot protection shall be used with jumping jack compactors and jackhammers.

Safety Disciplinary Policy
Under Webcor/Obayashi Joint Venture, all employees are required to follow company safety policies and operating procedures. When needed, employees will be provided with additional training and information, or retraining to maintain their knowledge.

Although Webcor/Obayashi Joint Venture reserves the right to discharge "at will," we believe that employees found performing work in an unsafe manner that would endanger the employee or another employee shall be subject to discipline or termination by management. Webcor/Obayashi Joint Venture strictly maintains a zero tolerance policy towards violations involving, but not restricted to: fall protection, lock-out/tag-out, and confined space violations. The Webcor/Obayashi Joint Venture Project Management and SSM shall determine the course of action best suited to the circumstances. The steps to be taken at a minimum shall include the following:

Verbal Warning – As the first step in correcting unacceptable behavior, the Supervisor shall review the pertinent facts with the employee. The Supervisor will consider the severity of the problem, and the employee's past performance. A verbal warning will be issued to the employee, if necessary; the employee will be placed on probation.

Written Warning – If the unacceptable performance continues, the next step will be a written warning. The written warning will clearly state the safety policy that was violated. Probation will be a part of the written warning. It may also include time off without pay. At the completion of the probationary period, the Supervisor will meet with the employee to determine if the employee has achieved the required level of performance.

Termination – The employee may be terminated if said employee does not improve their performance while on probation, or has violated another company safety policy within twelve (12) months.

Dismissal from Project
The following is prohibited and the individual(s) engaging in such activity(s) may be subject to dismissal from this project:

- Fighting and horseplay.
- Alcohol consumption or controlled-substance use on the site.

- Crowding or pushing while accessing work levels on ladders, scaffolds, etc.
- Throwing trash or any objects from heights.
- Using fire equipment irresponsibly.
- Destroying property or the work of other trades.
- Stealing.
- Gambling on the project site.
- Unsafe work habits.
- Persons using prescribed medication must notify his/her employer of such use prior to going to work or taking the medication.
- Working while your ability or alertness is so impaired by illness or fatigue or other causes that it might unnecessarily expose you or others to injury.
- Noncompliance of any safety rules or regulations.
- Lewd or abusive language towards jobsite personnel, Owner's personnel, or any member of the public.
- Smoking Cigarettes/E-Cigarettes in unauthorized areas

Job Vehicular Traffic

Only company-owned vehicles with signage are continuously required for the pursuit of trade subcontractor's and tiered subcontractor's work, and trucks delivering materials may be allowed access to the project site. All construction vehicle traffic access will be coordinated by Webcor/Obayashi Joint Venture.

There is no trade subcontractor or tiered subcontractor onsite parking on this project. Trade subcontractors and tiered subcontractors in violation of this request will be towed at their expense without further notice.

Subcontractors are to notify Webcor/Obayashi Joint Venture 48 hours in advance for approval of material deliveries. Material storage and layout must be approved by Webcor/Obayashi Joint Venture prior to delivery. Delivery vehicles will unload and depart the project site as soon as possible with the assistance of a qualified flagger to ensure pedestrian and vehicular traffic is controlled.

Subcontractors are reminded that continuous 2-way vehicular traffic must be maintained at all times for safe public accessibility unless posted otherwise. Two-way traffic control is to be provided by trade subcontractors prior to delivery vehicles entering the property.

Due to general liability exposure created by improper traffic control, all flagging, training, lane closures, etc. shall conform to the most current edition of the Manual on Uniform Traffic Control Devices (MUTCD). Local permitting issues shall be addressed by Webcor/Obayashi Joint Venture prior to the start of work. All workers in the traffic control area must be trained according to local, state and federal requirements and wear the appropriate reflective vest or high visibility clothing. Stop/Slow paddles shall be used to control traffic flow.

Temporary Offices

Temporary offices will be constructed of fire-resistant materials only and heated with approved fire-safe heating devices in accordance with manufacturers' instructions. Shall be equipped with a minimum of one 20lb ABC fire extinguisher and shall have a 40-gallon waste container adjacent to it. Temporary office locations must be approved by Webcor/Obayashi Joint Venture prior to installation.

Fire Protection

The purpose of the Fire Protection is to reduce to a minimum the possibility of fire damage and associated losses incurred during the construction of the Project. The following is a guide to be used on the Project to aid in preventing the spreading of materials loosed by fires and gases associated with combustion.

Appropriate action is the key to the prevention of loss of life and property damage. Emergency phone numbers will be posted in such a manner so as to be clearly visible. If a fire occurs, notify the local fire department and Webcor/Obayashi Joint Venture Management Team immediately. Extinguish fire with a noncombustible, such as sand, or an available fire extinguisher if properly trained to do so. Remove or shut off fuel supply and combustible material if trained and safe to do so.

General Fire Safety

- All temporary electric service, equipment, and wiring must be in accordance with Cal OSHA and NFPA 70, National Electric Code.
- Storage of any material within ten (10) feet of fire hydrants is strictly prohibited.
- Work areas shall be inspected on a regular basis to prevent accumulation of material.
    - All combustible waste material, dust, and debris shall be removed from the building and its immediate vicinity at the end of each work shift, or more frequently as necessary, for safe operations.
- No motors or machinery shall be left running during nonworking hours except as specifically directed by Webcor/Obayashi Joint Venture.
- All heating equipment shall have necessary Safety devices and shall be operated according to all applicable codes, rules and regulations, and manufacturers' instructions.
- All tarps and blankets shall be of fire-retardant material.
- All fuel and solvent containers shall be in approved containers and placed on drip pans.
    - Storage of these materials shall be in accordance with product Safety Data Sheet (SDS), statutory Hazardous Material requirements, and Fire Department requirements.
- No open or burning fires shall be permitted onsite.
    - Anyone doing so will be subject to immediate dismissal.
- No solid fuel shall be permitted on the site.
- Fire extinguishers shall be placed and maintained on the job in conspicuous and identified locations.
    - These fire extinguishers shall not be moved or discharged, except for fighting a fire.
- All gas bottles, such as propane, oxygen, and acetylene, shall be stored and secured in a vertical position in areas designated by Webcor/Obayashi Joint Venture.
    - All stored bottles shall be capped.
    - Oxygen and acetylene will not be stored within 20 feet of each other or must be separated by a one-half-hour-rated fire barrier.
    - At no time during construction shall propane or LPG be stored inside of a structure or building.
- All oxygen and acetylene in use shall be in proper carts with required separations and with at minimum a 10lb ABC fire extinguisher.
- During welding or cutting operations, a hot work permit and a fire watch with the proper fire extinguisher will be required and shall be the responsibility of the subcontractor or its tired subcontractor performing the work.
    - Hot work permits can be obtained from the SSM/DSP.

- Each trade is responsible for providing fire extinguishers and a fire-watch program for their work as required.

Hot Work Activities
When all fire prevention measures are taken, permits shall be authorized for the work. New construction work shall require the presence of a dedicated fire extinguisher (20lb, ABC), provided by the trade subcontractor performing the work, and any other preventive measures as may be necessary for protection of life and property such as but not limited to fire blankets and water supply.
The trade subcontractor and the SSM/DSP shall ensure that the surrounding area(s) are free of combustible material. When the work is of the nature that hot material may fall to areas below, the trade subcontractor and the SSM/DSP shall ensure that those areas are free of combustible material or material that may otherwise be damaged. Work in place must be protected by the trade subcontractor performing the work.

Each trade subcontractor and tiered subcontractor shall notify Webcor/Obayashi Joint Venture of proposed Hot Work activates through a Welding/Cutting Permit. The SSM/DSP shall review the Permit form with the trade subcontractor to assure that all areas of concern are accounted for in fire protection. Hot Work shall not be performed near fuel storage areas or other areas where combustible vapors may accumulate.

In occupied building, Hot Work shall not be performed in occupied buildings without notification of the local Fire Department responding agency. The fire suppression system for the building must be in operation. The appropriate Building or Department Managers must be notified and the work coordinated with their operations. Preparation for the work and clearing of combustible materials shall be in accordance with federal and state standards. Combustible material shall be cleared from the work area by a distance of 35 feet.

Material Handling

Housekeeping is an extremely important contributing factor for ensuring the safety and health in the workplace. Keeping aisles and passageways clear to provide for the free and safe movement of material handling equipment and employees is of the upmost importance. Other important contributing factors to ensure a safe working environment is as follows:

- Wear proper PPE at all times while handling material, equipment and tools.
- Post conspicuously the maximum safe load limits of floors within buildings and structures, in pounds per square foot, in all storage areas, except for floor or slab on grade.
    - Do not exceed the maximum safe loads.
- Do not store materials on scaffolds or runways in excess of supplies needed for immediate operations.
- Use ramps, blocking, or grading when a difference in road or working levels exists to ensure the safe movement of vehicles between the two levels.
- Do not place materials stored inside buildings under construction within six (6) feet of any hoist way or inside floor openings, or within ten (10) feet of an exterior wall which does not extend above the top of the material stored.
- Do not drop or throw blocks from an elevation or deliver blocks through chutes.
- Remove all nails from used lumber before stacking.
- When bending reinforcing steel on the job, use a strong bench set up on even dry ground or a floor to work on.

- Do not remove frozen material in a manner that would produce an overhang.
- Use proper lifting techniques.
- Stacking Material
    - Make sure that all materials stored in tiers are stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling, or collapse.
    - Stack bagged materials by stepping back the layers and cross-keying the bags at least every ten bags high.
    - When bags are removed from the pile, keep the length of the pile at an even height and maintain the necessary step backs every five bags.
    - When stacking inside a building, distribute the piles to prevent overloading the floor.
    - If not racked, stack and block structural steel, poles, pipe, bar stock, and other cylindrical materials as to prevent spreading or tilting.
    - Carefully pile structural steel to prevent danger of members rolling off or the pile toppling over.
    - Keep structural steel in low piles, giving consideration to the sequence of use of its members.
    - Stack corrugated and flat iron in flat piles, with the piles not more than 4 feet high; place spacing strips between each bundle.
    - Frequently inspect stock piles of sand, gravel, and crushed stone to prevent their becoming unsafe by continued adding to or withdrawing from the stock.
- Stacking Lumber
    - Do not stack lumber more than 20 feet high; if handling lumber manually, do not stack more than 16 feet high.
    - Stack lumber on level and solidly supported sills, and such that the stack is stable and self-supporting.
    - Stack stored lumber on timber sills to keep it off the ground. Sills must be placed level on solid supports.
    - Place cross strips in the stacks when they are stacked more than 4 feet high.
- Stacking Bricks
    - Do not stack bricks more than 7 feet high. When a loose brick stack reaches a height of 4 feet, taper it back 2 inches for every foot of height above the 4-foot level.
    - Never stack bricks, for storage purposes, on scaffolds or runways.
    - Always stack blocks; do not throw in a loose pile.
    - When stacking masonry blocks higher than 6 feet, taper back the stack one-half block per tier above the 6-foot level.
- Cement Bags
    - Carefully handle cement and lime delivered in paper bags to prevent the bags from bursting.
    - Do not pile cement and lime bags more than ten bags high except when stored in bins or enclosures built for the purpose of storage
    - When handling cement and lime bags, wear eye protection preventing any contact with the substance (such as goggles or other sealed eye protection) and wear long sleeve shirts with close fitting collar and cuffs.
    - Do not wear clothing that has become hard and stiff with cement.
    - Make sure to report any susceptibility of skin to cement and lime burns.
    - Make sure that a hand cream or Vaseline and eyewash is provided and kept ready for use to prevent burns.

- Store lime in a dry place to prevent a premature slacking action that may cause fire

Cleanup and Housekeeping

Trade subcontractors and tired sub-subcontractors shall leave the site clean and free of debris and hazardous materials by the end of each working day to the satisfaction of Webcor/Obayashi Joint Venture. Each subcontractor is responsible for removal of debris created by their work. Rubbish containers will be placed at a central location for the removal of trash and debris. Accumulation of trash and debris will not be tolerated. Webcor/Obayashi Joint Venture will perform necessary cleanup of same, at trade subcontractors' expense, upon failure to comply with cleanup notice request.

Ensure compliance with local fire regulations if disposing of waste material or debris by burning. Remove all scrap lumber, waste material, and rubbish from the immediate work area as the work progresses. Keep all solvent waste, oily rags, and flammable liquids in fire-resistant covered containers until removed from the work site.

Whenever materials are dropped more than 20 feet to any point lying outside the exterior walls of the building, use an enclosed chute of wood or equivalent material. When debris is dropped without the use of chutes, make sure that the area onto which the material is dropped is completely enclosed with barricades at least 42 inches high and 20 feet back from the projected edge of the opening above. Post at each level warning signs of the hazard of falling materials. Do not remove debris in this lower area until debris handling ceases above.

Security Services

Trade subcontractors and tired subcontractors shall be responsible for the security of toolboxes, onsite storage materials, etc.

Noise Control

This Section will conform to Specification Section 01 35 65 (1.2E) (1.8B), (1.8C) found in The Transbay Transit Center Contract Number 08-04-CMGC-000

Trade subcontractors shall conduct noise inspections and noise testing of equipment to ensure that all equipment on site is in good condition and effectively muffled per manufacturer's recommendation. Noise control shall be maintained by the trade subcontractors in all areas of construction, guarding against undue noise.

All motor-drive equipment shall have a proper exhaust system, which shall meet Cal/OSHA Standards on noise levels. Subcontractors are to post signage and provide proper hearing protection to employees using chipping guns, jackhammers, rock drills, or similar devices where the decibel level exceeds 85 and double hearing protection as required by state law.

Playing of radios, including headsets, is prohibited.

Combustible Material

Separate storage areas for acetylene, oxygen, and gasoline will be established by Webcor/Obayashi Joint Venture. The trade subcontractor shall post proper warning signs where combustible material is being used or stored. All gasoline will be in containers that meet NFPA and Cal/OSHA requirements, and will be stored in designated areas only.

All acetylene and oxygen bottles shall be secure and in a vertical position. All carts must be equipped with a fire extinguisher. All stored oxygen and acetylene must be separated from each other, by a minimum of 20 feet or a fire-rated barrier, with bottle caps secured in place as required by Cal/OSHA.

Crane

The safe operation and proper maintenance of cranes and rigging on the site shall be the overall responsibility of the trade subcontractor. Each trade subcontractor shall also be held accountable for compliance with CAL/OSHA crane regulations for all cranes or derricks on the site, whether contractor owned, leased or rented. All rigging inspection logs shall be completed and submitted to Webcor/Obayashi Joint Venture SSM monthly.

A thorough inspection by a certified independent 3rd party company shall be conducted prior to initial use and post repair of a crane or derrick. Any deficiencies found shall be corrected before the equipment is placed into service. A copy of the annual certification inspection performed by a certified independent 3rd party shall be submitted to the Webcor/Obayashi Joint Venture SSM prior to the crane being operated on site.

Each contractor shall designate a competent person who shall inspect all cranes and derricks daily as part of the trade subcontractor's job site inspection program. Such inspections shall be documented and submitted to Webcor/Obayashi Joint Venture SSM weekly. Defective equipment shall be removed from service and repaired; service/repair shall be documented and submitted to Webcor/Obayashi Joint Venture SSM.

Loads shall not be passed or suspended over persons. Routes of suspended loads shall be preplanned to ensure no workers or the public are directly below suspended loads. Lifts shall not be conducted over employees, visitors, or areas occupied by the public. Tag lines shall be used for controlling all loads. Tag lines or guide ropes shall be used to control all loads. Accessible areas within the swing radius of the rotating superstructure shall be properly barricaded to prevent employees from being struck or crushed by the crane.

Crane Lift Plan

A complete, competent and Webcor/Obayashi Joint Venture approved Crane Lift Plan is required prior to any crane lift while working. The Crane Lift Plan must be submitted to Webcor/Obayashi Joint Venture 48 hours (2 business days) prior to mobilization at a minimum. Neither TJPA nor Webcor/Obayashi Joint Venture shall be held responsible for any delay allegations as a result of the trade subcontractor failing to submit Crane Lift Plans on a timely basis. The Trade Subcontractor / Crane Company / Rigging Company is responsible for the accuracy of all calculations and inspections. This planning process has been established to help ensure proper coordination between trade subcontractors and Webcor/Obayashi Joint Venture. No warranty or certification of the suitability of this plan is accepted by Webcor/Obayashi Joint Venture.

The Crane Lift Plans must be based on a "worst case" combination of load weight with chart deductions and lift radius for a specific crane configuration in a specific location. Work that is not anticipated but may arise due to site conditions (moving equipment, loading materials onto floors, etc.) must be reviewed with Webcor/Obayashi Joint Venture prior to hoisting. Changes affecting crane configuration may require the Crane Lift Plan to be amended.

Lifts exceeding 75% of the cranes stability / structural capacity chart, requiring movement of a crane carriage with the load, personnel platforms, critical loads (long lead time, cost), tripping loads, work over occupied facilities, or work involving encroachment on public rights of way, will require the preparation, submittal and review of a specific JHA (Note: These lifts are discouraged). These lifts must be reviewed in advance. The Crane Lift Plan(s) may have to be prepared and stamped by a licensed Professional Engineer to be approved by Webcor/Obayashi Joint Venture.

Attachments to the Crane List Plan may include but are not limited to:

- Plot plan with crane location (identify swing path, delivery truck locations, location of any overhead power lines, etc)
- Elevation plan
- Crane load charts and calculations including any notes
- Dimension illustration and specifications for crane and range chart
- Operators license, training information, USDOT medical certificate and OSHA training
- Rigging plan, lists and diagram
- Names and qualifications for designated and competent persons (crane operator, A/D Supervisor, rigger and signal person
- JHA
- Logistics and assembly / dismantle plan
- 3rd party annual inspection certification
- Weight of material
- Lighting and wind restrictions (from operators manual)

The Crane Lift Plan may be valid for more than one day, as long as the configuration, location, maximum expected load, and maximum expected radius does not change. Multiple lift plans will be required for multiple locations.

Responsibility
It is the responsibility of the Trade Subcontractor and the Crane Operator to ensure that they and their employees are qualified, competent, properly equipped and properly trained to perform the activities outlined in this plan.

Management
The trade subcontractor is responsible to visit the site prior to the lift date to review documentary information pertaining to the site, which is maintained by Webcor/Obayashi Joint Venture. The trade subcontractor is responsible to obtain all information that is necessary to develop a power line safety plan, if needed. Furthermore, trade subcontractors are responsible for ensuring rigging equipment is in good condition and provided with safety devices as applicable. This includes such things as safety latches on hoisting hooks, chains, wire rope and slings are free from defects and conform to standard load ratings for work being done and eye splices conform to safety standards. Trade subcontractor's employee training is current and each contractor shall ensure that all of its employees involved in crane activities receive

comprehensive training as to their responsibilities. This training shall include hand signals and those authorized to give signals. Said training shall be documented.

Each trade subcontractor shall ensure that its crane operators is not engaged in any practices that may divert their attention while engaged in crane operations, ensure the operator is physically and mentally fit for duty, responds to only clear signals and stop signals. The trade subcontractor shall ensure the operator is intimately familiar with the equipment being used and is empowered to discuss any issues with their Supervisor.

Operator

Each crane operator will be specifically assigned the responsibility for safe operations and shall be given written instructions as applicable. Only designated operators who have been licensed by an approved agency or union and meet the requirements shall be in or on the crane during operations. The crane operator shall be responsible for determining the safe operation of their crane and the safety of each lift. The operator has the authority to refuse a lift due to safety concerns. For example refusing to lift any loads that are not safely rigged. Any manager, supervisor or person attempting to bypass the crane operator's authority on this issue will be immediately removed from the project. The operator shall immediately shut down the crane if the operator suspects any problems with the crane or if any part of the crane, rigging or load strikes any object. Immediately report the issue to Webcor/Obayashi Joint Venture Supervisor and SSM.

The operator is also responsible for assuring that routine maintenance is performed, as well as necessary repairs and to coordinate testing and maintenance personnel when necessary. Daily inspections shall be conducted to include but not limited to condition of brakes, functioning of safety devices and limiting devices, electric power installation, overload controls, conditions of the structural membrane and ensure a fire extinguisher is available and current.

Verification of a current annual inspection certification shall be available for the crane. Verification that manufacturer's rated load capacities, recommended operating speeds, and special warnings or instructions are posted on the crane and are visible from the operator's station. Upon request the operator may be asked to demonstrate their knowledge of the crane and the crane load chart among other items.

Responsibility for assuring that signaling and communications are adequate. This includes making sure that personnel at materials loading and receiving areas use correct hand signals. Where conditions require, radio communications will be used with a clear channel for crane operations. Making sure that adequate clearances exist between operating areas and nearby structures, especially power lines. Ensure that good housekeeping is maintained in and around the equipment. The operator shall never leave the controls while there is a load on the hook.

Training Requirements

Training records must be submitted to Webcor/Obayashi Joint Venture SSM prior to the employee(s) first day on site.

Riggers shall meet the qualified rigger requirements of subpart CC – Cranes and Derricks in Construction, as specified in 29 CFR 1926.1401, 1926.1404, and 1926.1425. These provisions are effective November 8, 2010. The more stringent rule shall apply.

Operators shall meet the qualified operator requirements found in 29 CFR 1926.1427. The operator has been licensed by an approved agency or union and meet the requirements in Chapter 5, ANSI B30 and the operator has passed their physical exam conducted by a license Physician approved by the DOT.

Fall Protection

Work activities that expose worker(s) to fall hazards of six (6) feet or greater measured from the work platform to the bottom of the sole of the foot are activities defined by Webcor/Obayashi Joint Venture to be High Hazard and therefore require detailed, written Job Hazard Analysis (JHA). Webcor/Obayashi Joint Venture maintains a zero tolerance policy for fall protection infractions. Anyone found violating this policy may be removed from the site immediately. All trade subcontractors shall provide appropriate fall protection at the Companies cost.

Possible conditions that may require fall protection:

- Ladders
- Aerial Lifts / Scissor Lifts
- Scaffold work
- Precast erection
- Unprotected Sides & Edges / Leading edges
- Excavations & Trenching
- Wall Openings
- Holes

Trade subcontractor are required to provide training and fall protection for their employees. This can be accomplished through the use of the following systems:

- Guardrail System
- Positioning Device System
- Warning Line System
- Personal Fall Arrest system
- Safety Net System
- Controlled Access Zone

The building perimeter cable is placed as a guardrail protection, and is not provided for tie-off protection.

Webcor/Obayashi Joint Venture does not allow the use of body belts or a Safety Monitor System.

Fall Protection Training

Trade subcontractors and tiered subcontractors must provide, as a minimum, by a competent person, the following training. Documentation of training must be forwarded to Webcor/Obayashi Joint Venture upon request:

- The nature of the fall hazards in the work area.
- The correct procedure for erecting, maintaining, disassembling and inspecting the fall protection systems to be used.
- The use and operations of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, controlled access zones and any other methods of protection to be used.
- The limitations on the use of mechanical equipment.
- The correct procedures for the handling and storage of equipment and materials
- The erection of overhead protection.
- The role of workers in rescue plans.

Rail Systems

A standard railing should consist of a top rail, intermediate/mid-rail, toe board and posts. The top rail should be approximately 42 inches from the upper surface of the rail to the floor, platform, or ramp level. The top rail should have a smooth surface throughout its length and be made of at least 2-inch by 4-inch

stock, 3/8-inch double clamped wire rope or its equivalent. It should be secured to withstand a 200-pound, horizontal force with minimum deflection.

The midrail should be halfway between the top rail and the floor, runway, platform, or ramp. The ends of the rail should not overhang the terminal posts except when it does not constitute a projection hazard. The midrail sill should be made of at least 1-inch by 6-inch stock or its equivalent.

The toe board should have a 4-inch minimum height and should be securely fastened in place with no more than 1/4 inch clearance above the floor level.

Wooden railing posts (verticals) should be made of at least 2-inch by 4-inch stock or its equivalent, and be spaced so as not to exceed 8 feet on center.

Other types, sizes and arrangements of railing construction are acceptable, provided they meet the following requirements. Have a smooth surfaced top rail approximately 42 inches above the floor, strength to withstand the minimum of 200 pound top rail pressure with a minimum of deflection and for specific material requirements, refer to applicable regulations.

Guard Rail Openings

Work that requires the opening of guardrails or the removal of hole covers shall be approved in advance by the Webcor/Obayashi Joint Venture Project Management. Particular attention shall be given to the alternate means of fall protection required to safely perform the work and protect other workers in the vicinity of the fall exposure. Those who remove the rail, are responsible for replacing it in a manner meeting or exceeding local, state, federal, or Webcor/Obayashi Joint Venture practices, whichever may be more stringent.

Floor & Wall Openings

To control conditions where there is a danger of workers or materials falling through floor, roof, perimeter edges or wall openings, such openings shall be securely covered and/or protected, capable of withstand 2x the load, be secured to the floor and shall be inspected daily by the trade subcontractor competent person. Trade subcontractor's Competent Person is responsible for identifying any floor opening or hole requiring to be protected. Covers should be clearly marked "Hole Do Not Remove" in a high visible color and anchored.

For purposes of covering, a floor opening is defined as any opening from 2" up to 16 square feet. All others must be protected with top and intermediate rail and toe board. All protection systems are to be maintained at all times. Any violation that is not rectified immediately will result in removal of the responsible Supervisor. Further violations will result in termination for cause of the responsible subcontractor's contract.

The building perimeter, shafts, and floor openings shall be protected with guard rails and toe boards. Personnel working at a stationary position within 6'-0" of the building perimeter or the edge of a shaft or a floor opening will wear a full body harness and be tied off with an appropriate lifeline. Trade subcontractors and tiered subcontractors shall not remove any guard rail or fall protection device without the express consent of Webcor/Obayashi Joint Venture. Any employee removing such protection without authorization will be removed from the project without recourse. Any area where guardrails and toe boards have been removed shall not be left unattended during a shift. In no case will any guardrail or toe board be left down at the end of a shift.

In locations where temporary protection conflicts with scheduled construction, the trade subcontractor or the tiered subcontractor shall notify Webcor/Obayashi Joint Venture in advance of the work of necessary modifications. The trade subcontractor or the tired subcontractor shall remove the temporary protection and provide other appropriate temporary measures for the performance of their work.

Personal Fall Arrest Systems
Personal fall arrest systems are designed to control the fall of a worker and minimize the injury once a worker has fallen. Personal fall arrest systems consist of a full body harness, a shock absorbing lanyard or retractable, and a tie off point.

General Fall Protection

- Any safety harness, lifeline or lanyard actually subjected to in-service loading must be immediately removed from service and should not be used again for worker safeguarding
- Fall arrest equipment should be removed from service when evidence of wear is detected.
- All safety harnesses, lifelines and lanyards must have a nominal breaking strength of 5,000 lbs (5,400 lbs in CA).
- All fall protection equipment shall be inspected daily/monthly and before each use, with documentation made available upon request that it is in proper working order.
- Body Harness
    -
- Lanyards
    - Retractable lifelines are preferred where direct anchorage is not available.
    -
    - All lanyards must be equipped with locking snap hooks.
    - Appropriate shock absorbing lanyards will be used for fall protection when they do not create a greater hazard due to the length of the potential fall.
    - Shock absorbing lanyards are not to be used in combination with a retractable lanyard.
- Anchorage point
    - The anchorage (tie off point) must be capable of withstanding a minimum 5,000 lbs (5,400 lbs in CA) tensile strength per worker attached.
    - Anchorage used for attachment of personal fall arrest equipment should be secured above the point of operation whenever possible
        - Anchorage, tie off, must generally be above the worker's head.
    - Anchorage must be high enough that the worker will not strike any lower level surface or object should a fall occur.

Safety Nets
The use of safety nets may be allowed only after a written fall protection plan, limited to the actual work to be performed, is reviewed and approved by Webcor/Obayashi Joint Venture. Safety nets should be provided by the trade subcontractor or tiered subcontractor when work places are more than 25 feet above the ground or other surfaces where the use of ladders, scaffolds, catch platforms, temporary floors, safety lines or safety harnesses are impractical. When safety net protection is required, operations should not be undertaken until the net is in place and has been thoroughly tested.

Safety nets should extend 8 feet beyond the edge of the work surfaces where workers are exposed and should be installed as close under the work surface as practical. In no case should the safety net be more

than 25 feet below the work surface. Nets should be hung with sufficient clearance to prevent the user's contact with surfaces or structures below. Clearances should be determined by impact load testing. The mesh size of the nets should not exceed six (6) inches by six (6) inches. All nets should meet accepted standards of 17,500 foot pounds minimum impact resistance, as determined and certified by the manufacturer, and should bear a label of proof test. Edge ropes should have a minimum breaking strength of 5,000 pounds. Forged steel safety hooks or shackles should be used to fasten the net to its supports. Connections between net panels should develop the full strength of the net.

Rescue Plans
Specific plans for rescue of worker(s) should be developed and rehearsed prior to initiating work requiring the use of fall protection. Rescue plans and the basic work plan should be submitted to the Webcor/Obayashi Joint Venture Project Management and SSM for review and comment. Concerns expressed by Webcor/Obayashi Joint Venture Project Management and SSM or any other reviewing authority shall be addressed fully prior to exposing any worker to the elevated work area.

Falling Object Protection Systems
Anytime a potential hazard of falling objects exists, suitable systems must be provided to protect workers. Examples of suitable fall object protection systems may include covers, toe boards, canopies and debris nets. Proper barricading shall encompass the entire possible target area.

Ladders
All ladders shall be inspected prior to use and used for its intended purpose.

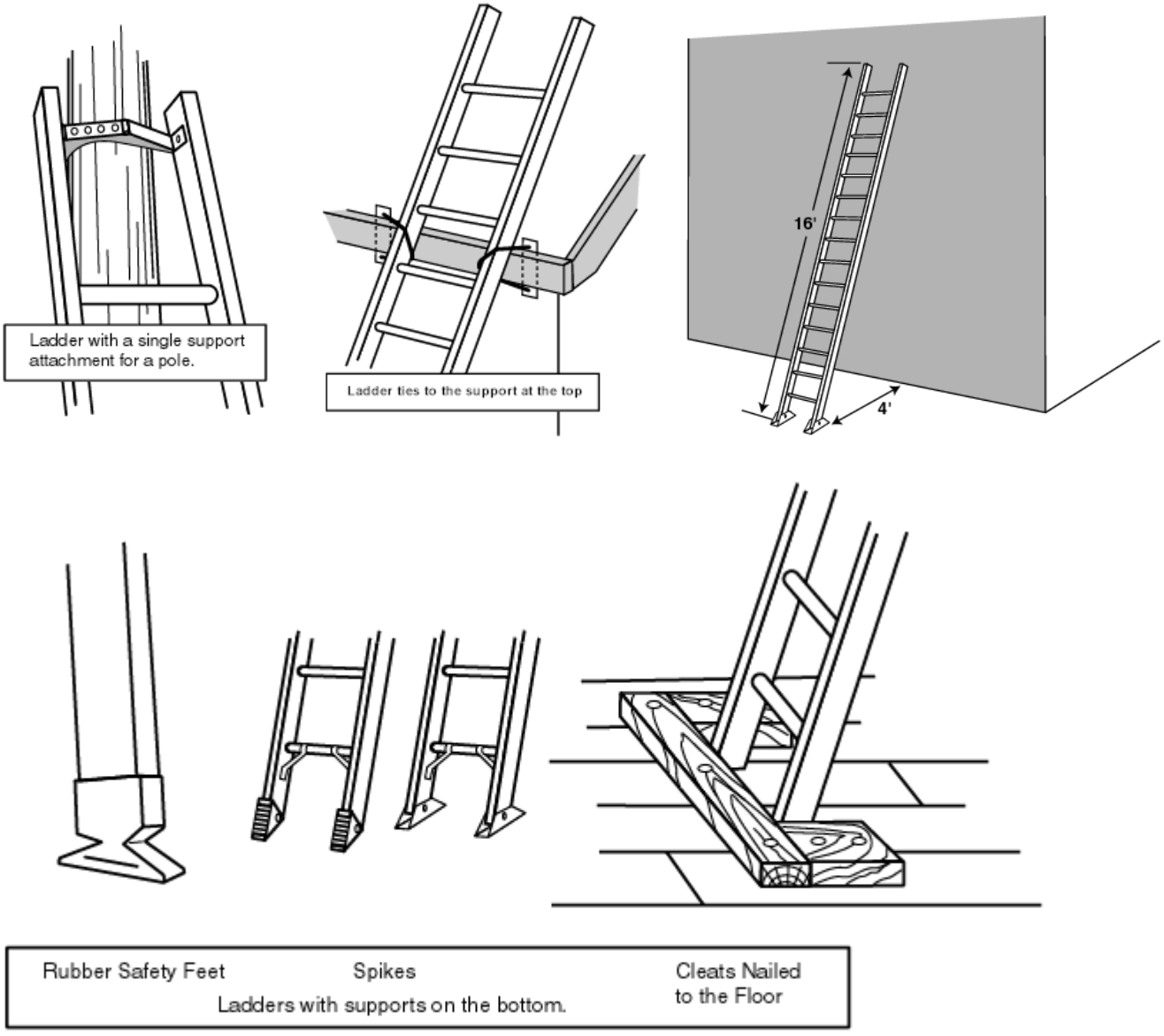
General Ladder Safety
- When ascending or descending a ladder, employees shall maintain three-points of contact and not carry anything that could cause them to fall. Pull ropes should be placed at all access ladders to lift tools or equipment from level to level.
- As a minimum, only type 1 or 1-A Heavy/Extra Heavy duty ladders, which carry a minimum of 275 lbs. to 300 lbs., will be allowed on Webcor/Obayashi Joint Venture projects.
- Metal ladders shall not be used on Webcor/Obayashi Joint Venture projects.
- Fall prevention shall be considered by the competent person if an employee works from a ladder 6’ or more above a lower level.
- Ladders are not to be painted except for numbering purposes.
- Do not use ladders for skids, braces, workbenches, or any purpose other than climbing.
- Always face the ladder when ascending and descending.
- If you must place a ladder over a doorway, barricade the door to prevent its use and post a warning sign.
- Only one person is allowed on a ladder at a time.
- Do not jump from a ladder when descending.
- All joints between steps, rungs, and side rails must be tight.
- Safety feet must be in good working order and in place.
- Rungs must be free of grease and/or oil.
- Portable ladders must be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder.
- All ladders must be equipped with safety (non-skid) feet.

Stepladders

- Do not place tools or materials on the steps or platform of a stepladder.
- Do not use the top two steps of a stepladder as a step or stand.
- Always level all four feet and lock spreaders in place.
- Do not use a stepladder as a straight ladder.

Straight type or extension ladders

- All straight or extension ladders must extend at least three (3) feet beyond the supporting object when used as an access to an elevated work area.
- After raising the extension portion of a two or more stage ladder to the desired height, check to ensure that the safety dogs or latches are engaged.
- All extension or straight ladders must be secured or tied off at the top and bottom.



Scaffolds

All scaffolds shall be constructed and maintained so as to meet all safety requirements of Cal/OSHA and Webcor/Obayashi Joint Venture. Failure to maintain scaffolds in good condition will result in removal by Webcor/Obayashi Joint Venture. All scaffolds must have top rails, mid rails, and toe boards at all platform levels. All scaffolds are to be built under the supervision of a competent person. The person's name and their qualifications shall be submitted in writing to Webcor/Obayashi Joint Venture prior to the start of work. Daily pre-shift inspection checklists shall be performed by a competent person, maintained by the trade subcontractor, available to all who access the scaffold and submitted to Webcor/Obayashi Joint Venture upon request.

A competent person shall determine if it is feasible to use fall protection devices while erecting /dismantling a scaffold. 100% fall protection is required at all heights above 6'. Rolling scaffold wheels shall be locked when in use. A horizontal, diagonal brace shall be in place to prevent the scaffold from "wracking". Cross bracing shall not be used as a top or mid rail.

Aerial Lifts

Only authorized persons should operate an aerial lift, and must be trained on the equipment they will be operating. A spotter may be needed when there is a potential for operator injury due to physical contact with facility systems or structures or in congested areas. Spotters may also be needed when there is a potential for damage to sensitive facility systems or structures.

Lifts should be inspected each day prior to use to verify they are in safe working condition. Any lift that does not meet inspection guidelines shall be removed from service and either returned, replaced, or modified to meet requirements. Boom and basket load limits specified by the manufacture should not be exceeded. The brakes should be locked and when outriggers are used, they should be positioned on pads or a solid surface. Wheel chocks must be used before using an aerial lift on an incline provided they can be safely installed. Aerial lifts should have both upper and lower controls. Upper controls should be in or beside the platform within easy reach of the operator. Lower controls should provide for overriding the upper controls. Controls should be plainly marked as to their function. Lower level controls should not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

Always stand on the floor of the basket, do not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position. A body harness should be worn and a shock absorbing lanyard attached to the boom or basket when working from an aerial lift. Tying off only to recommended anchorage points.

An aerial lift truck should not be moved when the boom is elevated with personnel in the basket.

Scissor Lifts

Lifts should be inspected each day prior to use to determine that they are in safe working condition. Only authorized persons should operate a scissor lift, and must be trained on the equipment they will be operating. Lifts should be operated in accordance with manufacturer's recommendations. Any lift that does not meet the required inspection guidelines shall immediately be removed from service and either returned, replaced, or modified to meet this requirement. A spotter may be needed when there is a potential for operator injury due to physical contact with facility systems or structures and in congested areas. Spotters may also be needed when there is a potential for damage to sensitive facility systems or structures.

Electrical

Ground Fault Circuit Interrupter (GFCI) protection is required for all electrical cords and tools. Each trade subcontractor shall provide GFCI protected power strips for use on the site when permanent power has been energized and permanent outlets are placed in service. Each trade subcontractor shall be responsible for providing and maintaining temporary GFCI's for their employees if a GFCI receptacle is not available.

Lockout/Tag out Procedures (LOTO)

Subcontractors shall submit their written LOTO program and documented employee training prior to beginning LOTO procedures. The program must include scope of training, pre-planning and specific LOTO procedures. All individuals who are working in or around the hazardous energy shall place their own lock and tag on the disconnect switch of the energy source. At no time will someone be allowed to remove another employee's lock unless it has been cleared through Webcor/Obayashi Joint Venture Competent Supervision.

Powder Actuated Tools

Only low-velocity-type tools will be allowed on this project. Special permission from Webcor/Obayashi Joint Venture must be obtained before high-velocity types can be used, and then only if the job requires it. All personnel working with powder-actuated tools shall be property instructed and licensed for operation of the tool and shall be in possession of current certification while using powder-actuated tools. Hearing protection signs, ear plugs and warning signs shall be posted in the work area where powder-actuated tools are in use.

Heat Illness Prevention

Heat related illnesses are avoidable if the employees are trained and the right actions are taken before, during, and after working in either indoor or outdoor hot conditions. High temperatures, humidity, air velocity and radiant heat from the sun or a furnace can stress the body's ability to cool itself making heat illness a big concern during hot weather months. These would be considered environmental risk factors. Every employee whose job duties require them to work in the outdoors during summer months, are exposed to elevated heat conditions and therefore are susceptible to heat illness.

The three major forms of heat illnesses are: heat cramps, heat exhaustion, and heat stroke. Heat stroke can be a life threatening condition. This document will outline those actions as well as describing the three major forms of heat illness, how to recognize them, and what an action to take to provide first aid before medical care is provided. If an employee is experience heat related illness notify their Supervisor and Webcor/Obayashi Joint Venture SSM immediately.

Heat Cramps

Heat cramps are the most common type of heat related injury and probably have been experienced by nearly everyone at one time or another. Heat cramps are muscle spasms which usually affect the arms, legs, or stomach. Frequently they do not occur until sometime later after work, at night, or when relaxing. Heat cramps are caused by heavy sweating, especially when water is not replaced quickly enough. Although heat cramps can be quite painful; they usually don't result in permanent damage.

Prevention/First Aid:

Drink electrolyte solutions such as Gatorade or plenty of water during the day and try eating more fruits such as bananas to help keep your body hydrated during hot weather. Call 911 and contact your supervisor immediately if the Person becomes ill.

Heat Exhaustion
Heat exhaustion is more serious than heat cramps. It occurs when the body's internal temperature regulating system is overworked, but has not completely shut down. In heat exhaustion, the surface blood vessels and capillaries, which originally enlarged to cool the blood, collapse from loss of body fluids and necessary minerals. this happens when you do not drink enough fluids to replace what you are sweating away symptoms Include: Headache, heavy sweating, intense thirst, dizziness, fatigue, loss of coordination, nausea, impaired judgment, loss of appetite, hyperventilation, tingling in hands or feet, Anxiety, cool moist skin, weak and rapid pulse (120-200), and low to normal blood.

Prevention/First Aid**:**
The employee suffering these symptoms should be moved to a cool location such as a shaded area or air-conditioned building. Have them lie down with their feet slightly elevated. Loosen their clothing, apply cool, wet clothes or fan them. Have them drink water or electrolyte drinks. Try to cool them down, and have them checked by medical personnel. Victims of heat exhaustion should avoid strenuous activity for at least a day, and they should continue to drink water to replace lost body fluids. Call 911 if the person becomes non-responsive, refuses water, vomits, or loses consciousness.

Heat Stroke
Heat stroke is a life threatening illness with a high death rate. It occurs when the body has depleted its supply of water and salt, and the victim's core body temperature rises to deadly levels. A heat stroke victim may first suffer heat cramps and/or heat exhaustion before progressing into the heat stroke stage, but this is not always the case. It should be noted that, on the job, heat stroke is sometimes mistaken for a heart attack. It is therefore very important to be able to recognize the signs and symptoms of heat stroke and to check for them anytime an employee collapses while working in a hot environment. Symptoms of heat stroke include: A high body temperature (103 degrees F); a distinct absence of sweating (usually); hot red or flushed dry skin; rapid pulse; difficulty breathing; constricted pupils; any/all the signs or symptoms of heat exhaustion such as dizziness, headache, nausea, vomiting, or confusion, and possibly more severe systems including; bizarre behavior; and high blood pressure. Advance symptoms may be seizure or convulsions, collapse, loss of consciousness and a body temperature of over 108 degrees F.

Prevention/First Aid**:**
It is vital to lower a heat stroke victim's body temperature. Quick actions can mean the difference between life and death. Pour water on them, fan them, or apply cold packs. Call 911 to get the person medical aid as soon as possible.

Guidelines for Preventing Heat Illness
If an employee is coming back to work from an illness or an extended break or is just starting a job working in the heat, it is important to be aware that they are more vulnerable to heat stress until their body has time to adjust. The employee needs to let their Supervisor know they are not used to the heat. It takes about five (5) to seven (7) days for a body to adjust. Drinking plenty of water frequently is vital to workers exposed to the heat. An individual may produce as much as two (2) to three (3) gallons of sweat per day. In order to replenish that fluid the worker should drink three (3) to four (4) cups of water every hour starting at the beginning of your shift. Taking breaks in a cool shaded area and allowing time for recovery from the heat during the day are effective ways to avoid heat illness. Avoid or limit the use of

alcohol and caffeine during periods of extreme heat, both dehydrate the body. Whenever possible wear clothing that provides protection from the sun but allows airflow to the body. Protect your head and shade your eyes if working outdoors.

During the designated warmer months of the year (April through September) all jobsites are required to incorporate heat illness prevention and awareness training into the Tailgate Safety Meetings. Training documentation shall be submitted to Webcor/Obayashi Joint Venture SSM. Shade and plenty of water shall be provided in sufficient amount to each and every employee. Emergency services must be called when an employee(s) experience a heat related illness

Drinking Water
Trade subcontractors shall provide potable drinking water, cups, and trash receptacles for their employees. All trash receptacles shall be properly emptied on a daily basis.

Use of Tools and Equipment

Each trade subcontractor is responsible to provide proper instructions for their employee's use of all tools and equipment. When the use of portable electric or pneumatic tools is needed, proper safety guards must be in place and operational. Power tool cord "whips" must meet NEC requirements. Air compressor hoses must be "clipped" together and tools are not to be raised or lowered by their cords or air hoses.

Hazardous Material

This Section will conform to Specification Sections 01 13 50 (1.4B and C) and (1.8D) found in The Transbay Transit Center Contract Number 08-04-CMGC-000

Currently Webcor/Obayashi Joint Venture does not anticipate, based on the scope of work, to have any excavations that will require special protection. In the event the situation does arise, The Trade Subcontractor will submit all appropriate documentation (protections, support systems, inspection process, access) preceding the activity.

Hazardous Communications Program
All subcontractors are to comply with Webcor/Obayashi Joint Venture's Hazard Communication Standard Policy.

If an employee is allergic to cement, or may be susceptible to lime burns, or skin disorders ensure that employees Supervisor is aware and do not assign that employee to tasks associated with those irritants. If an employee is allergic to or cannot use any other chemicals there Supervisor must be notified.

Hazard Communication Standard Policy

This Section will conform to Specification Sections 01 15 45 (1.2A1, 1.2A2),(1.13D),(1.4A), (1.4C) found in The Transbay Transit Center Contract Number 08-04-CMGC-000

The TJPA will not review the HASP for its content, nor will the TJPA be liable for Contractor's failure to have an adequate HASP or implement it. Receipt of the HASP by the TJPA neither constitutes the legality of the HASP nor incurs liability with Trade Sub contractor. Noncompliance with this portion of the Webcor/Obayashi Joint Venture Safety Policy will be written up as a Safety violation and may result in a

Safety fine and/or nonpayment to the subcontractor(s). Webcor/Obayashi Joint Venture is only required to train its employees to comply and observe the policy. It is the responsibility of each trade subcontractor and each tiered subcontractor to train their employees in the implementation and use of the Hazard Communication Policy.

Trade Subcontractors shall submit a Health and Safety Plan (HASP) in accordance with this Contract specification. Upon approval of the HASP, Trade Subcontractor shall provide two (2) copies on compact disc in Portable Document Format (PDF) with properly labeled cases. Safety Data Sheet (SDS) (previously known as Materials Safety Data Sheet (MSDS)) for all chemicals and other hazardous materials to be used.

Trade Subcontractors shall submit a site-specific environmental HASP in accordance with these specifications and 29 CFR 1910.120, 8 CCR 5192. The HASP shall remain in effect throughout the life of the Contract, and a copy of the HASP must be on site at all times. Trade subcontractors shall submit five (5) copies of the HASP at least ten (10) working days before any demolition or any building materials-disturbing activity, and no later than thirty (30) days after the Notice to precede for each Trade Subcontract package.

Each subcontractor must submit a copy of its written Hazard Communication Program to the Webcor/Obayashi Joint Venture SSM. An initial hazardous material/chemical listing for this specific jobsite must accompany the written Hazard Communication Program and all trade subcontractors shall maintain their SDS. A complete file of all SDS submitted is to be located at the jobsite office for review by all workers during job hours. Each trade subcontractor will discuss each new substance introduced on the jobsite at the weekly Safety meetings with their crews and the Superintendents of other trade subcontractors at the weekly Subcontractor Meeting. Each trade subcontractor must label the contents of all containers including secondary containers. The label must clearly identify the substance, hazard warnings, the name and address of the manufacturer and the location of the SDS.

Employees are required to be trained in Hazardous Communication, specifically in the dangers of working with these substances, chemicals, materials, required PPE and medical emergency training. Copies of training certificates shall kept on site and be submitted to Webcor/Obayashi Joint Venture SSM.

Bulk fuel storage is not allowed onsite.

Confined Space

No person shall enter a confined space such as manholes, underground vaults, tanks, pipes, tunnels, or other similar places until it is determined that it is safe to enter the space by an approved method. The trade subcontractors Competent Person is responsible for identifying any potential confined space and shall initially determine if a permit required confined space exists. A pre-planning meeting shall be held if a confined space exits and proper procedures shall be followed to ensure worker safety.

When “Hot Work” is performed in Permit Required Confined Spaces, the applicable Standards will be followed for Permit Required Confined Space work.

Equipment

Machinery and equipment shall be inspected and documented daily. Machinery and equipment shall be operated by authorized, trained personnel only. All operated equipment shall have backup alarms in working order. Operators shall inspect each work area to make sure that it is safe to operate the equipment in that area. Equipment shall not be serviced or repaired while it is in motion or running, unless there are appropriate safeguards in place to prevent injury.

Fuel-operated equipment, such as generators, air compressors, welders, etc., shall have a dedicated fire extinguisher near the equipment at all times when it is in operation. Fire extinguisher shall be rated as a minimum of 10lb ABC.

Excavation and Trenching

Currently Webcor/Obayashi Joint Venture does not anticipate based on the scope of work to have any excavations that will require special protection. In the event the situation does arise, The Trade Subcontractor will submit all appropriate documentation (protections, support systems, inspection process, access) preceding the activity.

This Section will conform to Specification Sections 00 07 00 (I), 00 08 14(1.2B), 00 08 14(1.4), 00 08 14(1.5B) and 01 35 65 (1.7C) found in The Transbay Transit Center Contract Number 08-04-CMGC-000

Pursuant to section 6705 of the California Labor Code, excavation for trenches five (5) feet or more in depth shall not begin until Webcor/Obayashi Joint Venture has received acceptance from the TJPA of Webcor/Obayashi Joint Venture detailed plan for worker protection from the hazards of cave-in's during excavation of such trenches. Webcor/Obayashi Joint Venture shoring plan shall be submitted in accordance with the requirements of the Specifications and shall show the details and supporting calculations of the design of shoring, bracing, sloping, or other provisions to be made for worker protection during such excavation. No plan shall allow the use of shoring, sloping or other protective system less effective than that required by the Construction Safety Orders of the Division of Occupational Safety and Health. If Webcor/Obayashi Joint Venture shoring plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared and sealed by an engineer retained by Webcor/Obayashi Joint Venture who is registered as a civil or structural engineer in the State of California. The TJPA acceptance of Webcor/Obayashi Joint Venture shoring plan shall not be construed to relieve Webcor/Obayashi Joint Venture of its responsibility for damage or injuries related to the excavation resulting from unsafe shoring.

The trade subcontractor will comply with all requirements of Federal OSHA, Cal/OSHA, the California Labor Code, Trade Subcontractor safety requirements, and these Contract Documents. The more stringent requirements shall apply. Prior to commence of earthwork activities the trade subcontractor shall review their safety procedures. Trade subcontractors shall submit for approval a comprehensive and site specific Health and Safety Plan (HASP) prepared by a certified Industrial Hygienist. A health and safety plan shall be certified by the trade subcontractor's Competent Hazardous Materials Supervisor and submitted to the TJPA for review and comment prior to implementation. Daily, pre-shift inspection of excavations, the adjacent areas and protective systems shall be made by the Competent Person for evidence of potential cave-ins, hazardous atmospheres or protective system failure. Daily, pre-shift inspection checklists shall be maintained by the subcontractor and submitted to Webcor/Obayashi Joint Venture weekly. No person shall enter an excavation where protection from ground movement is required until such protection is in place. 100% fall prevention and/or protection is required when working next to excavations greater than

five feet (5') in depth. Ladders or other means of approved access shall be used for all excavations. Stepladders shall not be used in a "leaning" position to enter or exit excavations.

Should trade subcontractors be notified by the TJPA of any unsafe or unhealthy condition associated with the performance of the Work and be required to take remedial action to correct such conditions, trade subcontractors shall take action immediately, if so directed, or within 48 hours after receipt of a notice of violation.

Respiratory Protection

Conditions may exist which require the utilization of respiratory equipment to protect employees against exposure to the inhalation of toxic or harmful gasses, vapors, mists, fumes and dust. Each Contractor must implement and enforce a written respiratory program in accordance with CAL/OSHA standards to protect employees from these types of exposures. Trade subcontracts written Respirator Protection programs shall be submitted to Webcor/Obayashi Joint Venture prior to use of respirators.

Only respirators that are applicable and suitable for the purpose intended shall be used. Respirators and cartridges shall be selected on the basis of the hazards to which the employee may be exposed to. Respiratory protective equipment shall be inspected regularly and maintained in good condition. Cartridges shall be replaced per manufacturer's recommended or calculated filter change-out schedule so as to provide complete protection. Respiratory protective equipment, which has been previously used, shall be cleaned and disinfected before it is issued to another employee.

Dust respirators are to be replaced in accordance with manufacturer specifications.

Employee shall be medically evaluated, Fit Tested and properly trained prior to using a respirator. A copy of the employee's medical approval will be kept on site by their employer. Every employee who wears a respirator must be clean-shaven to ensure the proper fitting of the respirator

Concrete Code of Safe Practices

The Concrete Code of Safe Practices is established to assist in conforming to the requirements for all construction activities involving concrete performed on Webcor/Obayashi Joint Venture projects. This includes, but is not limited to cast in place, shoring & reshoring, formwork/false work, post tensioning, placing & finishing.

Definitions

Bull float - a tool used to spread out and smooth concrete.

Formwork - the total system of support for freshly placed or partially cured concrete, including the mold or sheeting (form) that is in contact with the concrete as well as all supporting members including shores, reshores, hardware, braces, and related hardware.

Limited access zone - an area alongside a masonry wall, which is under construction and which is clearly demarcated to limit access by employees.

Precast concrete - concrete members (such as walls, panels, slabs, columns, and beams) which have been formed, cast, and cured prior to final placement in a structure.

Reshoring - construction operation in which shoring equipment (also called reshores or reshoring equipment) is placed, as the original forms and shores are removed, in order to support partially cured concrete and construction loads.

Shore - a supporting member that resists a compressive force imposed by a load.

Fall Protection – Concrete Specific

- Workers working more than six (6) feet above any adjacent working surface or placing reinforcing steel in walls, piers, columns, etc. should be protected by personal fall arrest system, guardrail system or equivalent device.
- Workers inside a Cunningham beam for, where the form leading edge is less than 39" in height and the worker is greater than 6' above a lower working surface, should be protected by a suitable fall protection system consisting of a catenary or similar pendant type line and personal fall arrest system.
- As soon as practical, a perimeter guardrail system should be established.
- Special attention and consideration should be given to workers on ladders within 6' of leading edge such as when working on columns or wall forms. Additional fall protection measures may be required.
- When working on vertical reinforcing steel columns or false work, fall protection should be set in advance from ladders, manually propelled elevated work platforms, or similar means so that 100% fall protection can be utilized.
- Workers on wall forms greater than six (6) feet above any adjacent working surface should be protected from falling by a personal fall arrest system or equivalent system. Ensure appropriate anchorage points are provided and utilized. Where applicable, a two (2) hook system for 100% fall protection should be utilized.
- Workers who are placing or tying reinforcing steel more than six (6) feet above any adjacent working surface should be protected from falling by personal fall arrest system or equivalent system.
- When workers are exposed to falls greater than six (6) feet above any adjacent working surface while erecting or dismantling shoring systems, they should have suitable fall protection as necessary utilize an appropriate anchorage point
- In addition to the above fall protection requirements, when erecting and dismantling shoring, a minimum of two (2) scaffold grade planks should be used or other similar means, such as mobile scaffolding, lifts, etc. Planks should rest on horizontal frame members and not on cross bracing.
- The use of positioning systems as a sole means of fall protection is not permissible.
- Unless otherwise provided by a site specific fall protection plan:
    - The placing of frames and stringers should be from below via appropriate ladders, temporary work platforms, false decks, scaffolds, or other similar work platforms.
    - The first several joists spread should be from below via appropriate ladders, temporary work platforms, false decks, scaffolds, or other similar work platforms. Once the first several joists are positioned, a work platform (e.g. 4x6 sheet of plywood or similar) should be placed on top of a placed joists and all further spreading of joists should take place from this work platform or successive sheets of plywood laid to extend this platform. Work should take place from the center of the bay, with joists spaced no greater than 24" on center. Any work within 6' of the leading edge and greater than 6' above a lower working surface should be protected by a suitable fall protection system.

Formwork/False work

Formwork, false work and shoring should be designed, fabricated, erected, supported, braced and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork. Formwork which is designed, fabricated, erected, supported, braced and maintained in conformance with ANSI A10.9-1983 Construction and Demolition Operations – concrete and masonry work, will be deemed to meet the requirements of this paragraph.

- Drawings or plans, including all revisions, for the jack layout, formwork including shoring equipment, working decks, and scaffolds, should be available at the jobsite.
- Procedures for safe installation, removal, lifting etc., should be available at the jobsite and all workers appropriately trained in these procedures as applicable.
- Work areas should be clear of all unauthorized personnel during installation, concrete placement and removal. Appropriate barricading, delineation and/or signage should be placed to limit access and alert other workers of hazards associated with the work area.
- At no time should workers place themselves underneath a live load.
- When hoisting material, the worker should be positioned to the side of the hoisted material and never into the pinch point between the hoisting equipment and the material or in the area where an operator would land material in the event of an emergency.
- Appropriate tag lines should be utilized as required and two (2) tag lines may be necessary to help align/control panels or forms.
- Safe means of access and egress should be maintained at all times.

Removal of Formwork

Forms and shores (except those used for slabs on grade and slip forms) should not be remove until the employer determines that the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination should be based on compliance with one of the following:

- The plans and specifications stipulate conditions for removal of forms and shores, and such conditions have been followed, or the concrete has been properly tested with an appropriate ASTM standard test method designed to indicate the concrete compressive strength, and the test results indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.
- Prior to dismantling, the entire system should be inspected to determine if there are any hazards from displacement, weakening, alterations etc. of the shoring and false work.
- Shores, cross braces etc. should only be removed in the immediate work areas and as appropriate.
- All nails should be removed or bent over immediately upon stripping.
- Shoring, formwork and all other equipment being removed should be stacked, consolidated or placed in an orderly manner as soon as practicable during the removal operation and egress/access paths maintained at all times.
- Only appropriate tools should be used for removal of shoring and formwork.

Shoring and Reshoring

- All shoring and reshoring operations should comply with all federal, state local and manufactures regulations.
- All shoring equipment (including equipment used in reshoring operations) should be inspected prior to erection to determine that the equipment meets the requirements specified in the formwork drawings.

- Shoring equipment found to be damaged, severely rusted, missing locking devices etc. should not be used for shoring. Shoring equipment that is in place and is found to be damaged or weakened, should be immediately reinforced.
- Erected shoring equipment should be inspected immediately prior to, during and immediately after concrete placement.
- The sills for shoring should be sound, rigid and capable of carrying the maximum intended load.
- Base plates should be attached to a minimum of 12' square, 2" plywood or equivalent.
- All base plates, shore heads, extension devices, and adjustment screws should be in firm contact, and secured when necessary, with the foundation and the form.
- Existing ground should be level, adequately compacted and loads distributed. Consideration should be given to adverse weather conditions such as washouts, rain impact to slopes etc. Special precautions such as hardwood wedges or bracing should be utilized on sloped surfaces.
- All clamps, screws, pins and other similar components should be in a closed or engaged position.
- Eccentric loads on shore heads and similar members are prohibited unless these members have been designed for such loading.
    - Ensure stringers are centered on these members to minimize eccentric loading.
- Adequate access should be provided to all form deck surfaces.
- When horizontal shoring is required, these should be engineered and special consideration should be given to installation and conformance to the completed design.
- Ensure all stringers and joists are fully supported and centered over shoring heads/top plates and adequately secured. Further, ensure that all stringers and joists are fully upright and not rolled.
- All horizontal shoring should be installed and erected in compliance with manufacture's requirements as well as federal, state and local regulations.

Frame Shoring

- The design of the shoring should be prepared by a qualified designer and the erected shoring should be inspected by an engineer qualified in structural design.
- The shoring design or layout drawing should be followed with no omissions of required components, or alteration in frame spacing's, types used, towers heights, locations or sizes.
- Shoring loads should be carried on all legs.
- All shoring fames should be plumb and level. This should be checked and corrected at a minimum of during erection and just prior to the pour.
- Adjustment of shoring frames should not be made once the pour begins.
- When shoring height exceeds a minimum of four (4) times the minimum base width, additional bracing and securing of the frames should be performed.
- Cross braces should never be climbed, workers should climb frames from the inside.

Screw Jacks

Screw jacks should not exceed the manufactures recommended extension height at any time. Screw jack extension should be kept to a minimum for maximum load carrying capacity. All screw jacks should be in firm contact with the foundation and frame legs.

Post Shoring

- The single post shores should be vertically aligned/plumbed.
    - This should be checked and corrected at a minimum of during erection and just prior to the pour.

- Adjustment of post shores for any reason should not be made once the pour begins.
- Refer to the manufacture's guidelines for additional stability measures and bracing requirements of each system used.
- Post shores should be adequately secured at top and bottom to prevent displacement.
- Whenever single post shores are used one on top of the other (tiered), they should comply with the following specific guidelines in addition to the general guidelines for formwork:
    - The single post shores should be spliced to prevent misalignment.
    - The single post shores should be adequately braced in two (2) mutually perpendicular directions at the splice level.
    - Each tier should also be diagonally braced in the same two (2) directions.

Ellis Shores

- Ensure shores are erected with the proper length of timbers allowing a minimum of 24" overlap between shore members.
- The shore clamps should be attached 12" apart with the upper clam at a minimum of 2" from the top of the lower shore. Each clamp should be secured with the appropriate number of type of duplex nails.
- Shores should be raised to the desired height by sliding the upper shore member upwards being careful to avoid pinch points.
- Shore hand jacks should not be used to raise decks, lift formwork or elevate concrete.
- Ensure all shores, jacks and clamps are inspected prior to use and any damaged or defective materials are removed or repaired prior to use.
- Safety nails should be secured above each clamp of the upper shore member casting to prevent uplift or movement during vibration.

Re-shoring

- Shores should not be removed, including cross bracing, until the concrete has gained sufficient strength to support its weight and superimposed loads. Such determination shall be based on compliance with one of the following:
- The plans and specifications stipulate conditions for removal of forms and shores, and such conditions have been followed or the concrete has been properly tested with an appropriate ASTM standard test method designed to indicate the concrete compressive strength, and test results indicate that the concrete has gained sufficient strength to support its weight and superimposed loads.
- Stripping and removal of shoring equipment should be performed in conformance to the approved stripping sequencing plan.
- Re-shoring should be erected, as the original forms and shores are removed, whenever the concrete is required to support loads in excess of its capacity.
- The design of the shoring should be prepared by a qualified designer and the erected shoring should be inspected by an engineer qualified in structural design.
- The shoring design or layout drawing should be followed with no omissions of required components, or alterations in spacing's, types used, heights, locations or sizes.
- Re-shores should be placed directly below load carrying legs to avoid punch through, stress reversals or other undesirable forces on the poured concrete.
- Slabs or beams should be allowed to take their permanent deflection before final adjustment of re-shoring equipment is made.
- Horizontal shoring should never be used as part of a re-shoring system.

Bracket Scaffolds

- Bracket scaffolds should only be used through bolted walls, with at least 5/8" diameter bolts.
- Scaffolds should be solidly secured to the walls or the supporting structure.
- Scaffolds should be able to support at least four (4) times the maximum intended working load.
- Spacing of brackets should not be greater than 10' apart.
- Railings should be installed on all scaffolds 6' or greater in height.
- Platforms should consist of at least two 2"x10" planks that extend at least 6" over each bracket and no more than 18".
- Platforms should be solidly planked with no more than 7" gap under the back rail and 14" gap to the face of the form.
- Planking should be scaffold grade lumber or equivalent and should be free from damage, defects, cracks, splits etc. Damaged planks should not be used.

Reinforcing Steel

All protruding reinforcing steel, onto and into which employees could fall, should be guarded to eliminate the hazard of impalement. When working at grade, impalement hazards from 4" to 6' in height, at a minimum, should be protected. Reinforcing steel for walls, piers, columns, and similar vertical structures should be adequately supported to prevent overturning and to prevent collapse. Employers should take measures to prevent unrolled wire mesh form recoiling. Such measures may include by are not limited to securing each end of the roll or turning over the roll. Reinforcing steel should be stockpiled as close as practicable to work areas. Additionally special attention should be taken towards access and egress to work areas, excavations and ensuring work areas are free from tripping hazards or other surface encumbrances.

Concrete Placement and Finishing

Appropriate PPE should be utilized during concrete placement and finishing. This includes but is not limited to safety glasses, fall protection, gloves, boots, hardhat, and long sleeves. Appropriate respiratory protection should be used for all concrete cutting, grinding, sanding, and blasting, dry mixing, jack hammering etc.

The following should be observed while working with concrete:

- When discharging concrete on a slope, the wheels of ready-mix trucks should be blocked, the brakes set to prevent movement and the operator with the vehicle at all times.
- All washout activities should be completed in the designated washout area.
- All concrete cutting, finishing and cleanup should be done in such a manner that all residue or waste water will be properly contained and disposed of.
- Appropriate precautions should be taken for specialty applications (e.g. acid washing, dyes, stains etc.); in their handling, storage use and disposal.
- Powered and rotating type concrete troweling machines that are manually guided should be equipped with a control switch that will automatically shut off the power whenever the hands of the operator are removed from the equipment handles.
- Bull float handles used where they might contact energized electrical conductors, should be constructed of nonconductive material or insulated with nonconductive sheath that's electrical and mechanical characteristics provide the equivalent protection of a handle constructed of nonconductive material.

- Masonry saws should be guarded with a semicircular enclosure over the blade.
- When operation air guns for cleaning off decks, inside forms etc., these guns should have a maximum of 30 psi nozzle pressure and be equipped with a safety release valve.
- Air guns should have pressure valves, and extension tube and the hoses well maintained with appropriate whip checks.
- Employee operating air guns should have appropriate PPE, including but not limited to, chip protection (i.e. face shield, goggles etc.), ear plugs and respiratory protection as required.
- No employee should be permitted to perform maintenance or repair activity on equipment (such as compressors mixers, screens, pumps used for concrete and masonry construction activities) where the inadvertent operation of the equipment could occur and cause injury, unless all potentially hazardous energy sources have been locked out and tagged.

Concrete Buckets

No employee shall be permitted to ride concrete buckets or work under concrete buckets while buckets are being elevated or lowered into position. Elevated concrete buckets shall be routed so that no employee or the fewest number of employees are exposed to the hazards associated with falling concrete or falling buckets. Concrete buckets equipped with hydraulic or pneumatic gates should have positive safety latches or similar safety devices installed to prevent premature or accidental dumping. Concrete buckets should be designed to prevent concrete from hanging up on top of the sides.

Pump-Crete Systems

Concrete pumping systems using discharge pipes should be provided with pipe supports designed for 100% overload. Compressed air hoses used on concrete pumping systems should be provided with positive failsafe joint connectors to prevent separation of sections when pressurized. Movement of concrete hoses should be planned to limit the amount of manual positioning of hose as much as practicable. When necessary, the use of hooks, ropes or other similar devices should be utilized when handling the concrete hose.

Buggies & Wheelbarrows

Concrete buggy handles should not extend beyond the wheels on either side of the buggy. Handles should be guarded or equipped with knuckle guards. All buggies, wheelbarrows or other similar conveyances should be properly maintained and repaired/replaced immediately if damaged, in poor repair or otherwise. Paths of access and travel should be level, free of debris and other surface encumbrances and ramps or other access ways should be appropriately built, maintained, and protected. Buggies, wheelbarrows etc. should not be overloaded.

Post-Tensioning Operations

No employee (except those essential to the post-tensioning operations) should be permitted to be behind the jack during post-tensioning operations. Signs and barriers should be erected to limit employee access to the post-tensioning area during tensioning operations. Appropriate fire protection measures should be taken during burning operations, including by not limited to spark control or blankets, fire extinguishers, wetting formwork etc.

Permitting/Documentation

Before a contractor is on site, the following items should be obtained in writing. A permit for excavation/trenching activities (Cal OSHA Excavation Notification Form as applicable) for all trenches/excavations that are equal to or greater than 5’ in depth where an employee is required to enter as

well as a permit for any false work or scaffolding 36' in height or greater total. Excavation and trenching plan, shoring/false work design or plan needs to also be submitted to Webcor/Obayashi Joint Venture in writing. Name(s) of competent person(s), soils analysis report and a copy of the trade subcontractor's safety manual are also required prior to work.

General Rigging Equipment Safety:

Inspect rigging equipment for material handling prior to use on each shift and as necessary during its use to ensure that it is safe. Remove defective rigging equipment from service.
Never load rigging equipment in excess of its recommended safe working load.
Remove rigging equipment when not in use from the immediate work area so as not to present a hazard to employees.
Mark special rigging accessories (i.e., spreader bars, grabs, hooks, clamps, etc.) or other lifting accessories with the rated capacity. Proof tests all components to 125% of the rated load prior to the first use. Maintain permanent records on the job site for all special rigging accessories.

Asbestos Abatement Program

Products that contain Asbestos can be helpful, but they can also be very harmful. Asbestos is a mineral which has many positive qualities. It is fireproof, heat resistant, lightweight, resistant to most chemicals, sound-absorbing and it does not conduct electricity. Asbestos has been used to mix with plaster and wallboard for strength and support, sprayed onto wall, ceilings, and steel girders for fireproofing, wrapped around pipes, boilers and heating ducts for insulation, in floor and ceiling tiles among others. Asbestos can break down into tiny fibers, like grains of sand or rope and can float in the air for long periods of time, allowing them to be easily inhaled. A powerful microscope is needed to see the fibers since they are invisible to the human eye, they have the strength of steel, and one cannot taste or smell them. Asbestos material that a worker may encounter generally fit into two (2) categories: Friable and Non-Friable. Friable asbestos is air born, thin, easily damaged or broken asbestos and is most dangerous to human's respiratory system. Non-friable is asbestos that is not damaged, a complete piece. The three most common materials that contain asbestos are thermal system insulation, floor tiles and sprayed-on materials. Thermal system insulation is the most common type of friable asbestos material, and can be found on boilers, utility pipes, ductwork and heating systems.

This Asbestos Abatement Program is developed to inform workers who don't really work directly with asbestos, but who may have incidental exposure, must receive at least "Asbestos Awareness" training. To help address OSHA's concerns, and provide the awareness training needed by employees under the regulation, employees shall be trained, understand monitoring activates and how to protect against potential asbestos exposure. Employees should understand how long-term exposure to asbestos can harm the human body as well as understand how to avoid potentially hazardous maintenance and custodial activities that could lead to asbestos exposure since custodians, engineers and maintenance workers have the highest chance of exposure to asbestos. Employees should understand which safe work practices should be used when helping with a minor asbestos clean-up and understand why and when there is a potential for exposure to asbestos. Air monitoring and medical surveillance can be important elements in providing a safer workplace.

Exposure to asbestos fibers can lead to a disease known as "Mesothelioma." Mesothelioma is a chronic disease, occurs over time. There is rarely acute side effects when a worker is exposed to asbestos. Symptoms of asbestos exposure may include shortness of breath, enlargement of the heart, scaring of the

lungs, cancer and death. People who smoke are especially vulnerable to Asbestos. Cigarette smoke breaks down the lungs' defensive system, and leaves them vulnerable to Asbestos fibers. Smokers are over 50 times more likely to become sick after long-term exposure to Asbestos.

While working with material that has or potentially has asbestos requires safe handling and proper PPE. Even a small tear in asbestos material can cause serious harm. If an employee suspects a piece of asbestos material is damaged their supervisor shall be notified immediately and secure measures shall be taken to ensure minimal exposure. These measure may include securing the material in a plastic bag secured with duct tape and wetting down the immediate area to ensure the material does not become friable.

Proper PPE

Although asbestos is not a skin contact hazard, by wearing disposable overalls helps reduce the potential of transferring asbestos from the work area to non-contaminated areas.

A respirator and designated filters shall be required to reduce the potential of introducing asbestos fibers into the lungs. A fit test and medical evaluation shall be conducted prior to an employee donning a respirator. The respirator must be the right size and securely fit a clean shaved face. Respirators shall be cleaned and stored as recommended by an Industrial Hygienist.

An Air Sampling Device may, at times, be worn by the employee to measure airborne concentrations of asbestos in the work are. The Air Sampling Device varies in design and appearance, however does include an air pump located near the employees face and a sampling cassette that is secured onto the employee. An Industrial Hygienist will instruct the employee in further details regarding the use of an Air Sampling Device.

Medical Surveillance

A Medical Surveillance program is put in place to monitor employees since asbestos causes chronic illnesses. The program tests the workers lung capacity and x-rays the chest cavity and lungs for any previous damage and to record current conditions. The worker may be asked to return for continued surveying depending on their potential exposure. The Medical Surveillance costs are that of the employer, free service to the employee.

Clean up Methods

The Asbestos Awareness Program is designed to make workers aware of the health hazards, locations and minor cleanup of asbestos, this program does not include Asbestos Work. Large quantities of asbestos required more detail and training than what is provided here. However, if a minor cleanup or containment is required follow these basic steps:

- Proper PPE: respirator, gloves, Tyvek body suit. Don and Done PPE properly
- Appropriate work area: the contaminated area is guarded with access available through the decontaminated area and final access to the non-contaminated area.
- Equipment: wet methods, HEPA vacuum shall be used. Low Abrasion Pad, at speeds less than 300rmp are acceptable.
    - Do not sweep or shovel material contain asbestos.
- Disposal
    - Asbestos materials must be properly bagged and labeled.
        - Use only official Asbestos Disposal Bags.
        - Use a Generator Label which lists the name and address of your facility.

- If an Asbestos Disposal Bag becomes torn, double bag and seal it immediately with tape.
- Asbestos is a regulated waste (it must be hauled to a licensed landfill).

Decontamination

After any work with Asbestos materials, workers must decontaminate themselves and their equipment. This prevents the spread of Asbestos dust and debris. Always use an official decontamination area that is equipped with a HEPA vacuum, as well as a plastic drop cloth (to contain any loose fibers). Never eat, drink or smoke in these decontamination areas, or any other area where asbestos is present. Scrub hands and face with soap and water before leaving work. If possible, shower before leaving your facility as well, if not, instruct the worker to shower immediately when they get home to prevent potential exposure to others. When decontaminating clothing, never brush off dust or debris because asbestos fibers may become airborne. Use a HEPA vacuum to remove materials from clothing before taking it off. Also vacuum equipment and Asbestos Disposal Bags. Tyvek suits will need to be disposed of in an Asbestos Disposal Bag and disposed of as regulated waste.

Lead Abatement Program

This program has been put in place because Webcor/Obayashi Joint Venture recognizes that some of the work we do has the potential to expose our employees to lead. We want to do as much as is practically possible to protect them from lead exposure.

Prior to the start of a project, professionals/Industrial Hygienist in lead detection and abatement will be brought in to do an Exposure Assessment to determine whether the work environments Webcor/Obayashi Joint Venture employees will be operating in has the potential to expose workers to lead. These professionals will be used to give Webcor/Obayashi Joint Venture direction as to how to proceed. It will be our goal to have lead abatement taken care of by licensed lead abatement professionals prior to the arrival of Webcor/Obayashi Joint Venture employees.

Lead can be found in a number of workplace environments. Until recently, lead was a common component in paints of all kinds (which can create exposure whenever sanding, sandblasting, scraping, or even demolition occurs).

Workplace experience and empirical studies have shown that lead is fairly easily absorbed into the body. Breathing airborne lead dust and fumes is the most common route of entry. Lead can also be absorbed if it comes into contact with the mouth or tongue.

Overexposure to lead can occur both on an acute basis, where large amounts of lead are absorbed into the body in a short period of time, or on a chronic basis where small amounts of lead are absorbed at any one time, for a long period eventually accumulating to cause significant health problems.

On May 4, 1993, OSHA published the Interim Final Rule for Lead Exposure in Construction. The Construction Standard establishes “Interim” procedures and work practices that must be followed in construction environments. The OSHA Standard and its compliance requirements are included at the end of this written program. The Lead Standards are “performance based”; the standard will tell you what you have to accomplish.

A General Requirement in the Lead Standards states employers must make sure that no employee is exposed to lead concentrations greater than 50 micrograms per cubic meter of air, averaged over an eight-hour period in any 24-hour day.

Typically, OSHA requires that you use the following methods to protect your employees through engineering controls, work-practice controls, respiratory protection, PPE, hygiene facilities and practices, housekeeping and employee information and training.

OSHA requires that every employer who is covered by these Standards provide information and training. For employers in the Construction Industry, it requires that they meet the training requirements of the Hazard Communication Standard. Information that must be given employees under the Hazard Communication Standard includes the hazards associated with lead exposure, warning signs and labels that can be found on materials containing lead, and how to find information about materials containing lead on Safety Data Sheet (SDS), and use of PPE.

Respiratory Protection Program

The purpose of this plan is to establish a program and procedures for wearing respiratory protection at the Transbay Transit Center. This program supports compliance with the Occupational Safety and Health Administration Respiratory Protection Standard as found in 29 CFR 1910.134. This program applies to all company employees who work in areas whose exposures to airborne contaminants require the use of respirators.

Definitions

Dusts: Particles released during work operations such as grinding and sawing.

Fit Testing: The process of making sure that an employee's respirator fits property and will provide the necessary protection without any leaks.

Fumes: Vaporized, condensed metals such as lead that may be present during welding operations.

Gases: Examples include nitrogen, methane, and carbon monoxide.

IDLH: An OSHA hazard classification: Immediately Dangerous to Life & Health. An atmospheric condition that poses an immediate hazard to life or poses immediate irreversible debilitating effects on health.

Mists: Particles of liquid released during operations such as spray painting.

NIOSH: National Institute for Occupational Safety and Health; an agency that establishes minimum performance standards for respirators and tests and approves respirators for various uses.

Vapors: Gaseous forms of a liquid such as paint solvents.

Responsibilities

Program Administrator

The Program Administrator is responsible for issuing and administering this program and making sure that the program satisfies the requirements of all applicable federal, state, or local respiratory protection requirements. Providing initial and periodic training to employees on respiratory protection requirements. Conducting hazard assessments where respiratory hazards may be present. Assisting managers and supervisors in the selection of appropriate respiratory protection for use on their jobsites.
Auditing the respiratory protection program to ensure its continued effectiveness.

Purchasing Agent

The Purchasing Agent will be the Jobsite Superintendent and is responsible for purchasing respiratory protection equipment and assuring that all equipment purchased is approved by NIOSH/MSHA.

Superintendent

Superintendents whose jobsites are required to wear respiratory equipment is responsible for knowing the hazards in their areas that require respiratory protection, knowing the types of respirators that need to be used, enforcing the wearing of respiratory protection in the areas where it is required, making sure employees are knowledgeable about the respiratory requirements for the areas in which they work and providing training on hazardous chemicals to employees.

Employees

Employees who are required to wear respirator protections is responsible for wearing appropriate respiratory protection, properly maintaining their respiratory protection equipment and keeping it in a clean and operable condition and notifying their Supervisor of any additional hazards.

Program Activities

Respiratory hazards will be assessed on the jobsite and appropriate protection will be provided for all affected employees. Employees are required to wear respiratory protection wherever respiratory hazards exist. Respiratory protection is stored and issued from the jobsite office. Efforts will be made to minimize the use of hazardous chemicals in the workplace. If the use of hazardous chemicals creates an imminent-danger situation, the operation will be discontinued.

Respirators

Respirators will be selected according to the type of activity for which they will be used and the type of potential air contaminants associated with these activities. Only NIOSH/MSHA approved respirators will be used. All respirator protection equipment will be used in accordance with the manufacturer's recommendations. In areas in which maintenance and sanitation services are unavailable or respiratory usage is limited, disposable respirators will be used. Non-disposable respirators which are used exclusively by one person will be maintained and cared for by the wearer. All non-disposable respirators which are used by more than one person will be cleaned and sanitized between each use. Chemical cartridge respirators will be stored in airtight, labeled containers between each use. All other respirators will be stored in a clean and sanitary manner and labeled with the wearer's name. Disposable respirators will be used until the cartridge or filter media requires replacement or when the face piece is dirty.

Respirators will be inspected by the wearer prior to each use. Supervisors on jobsites where respirators are used will verify that appropriate respirator protection is being used, inspected, and maintained properly. Non disposable respirators will be inspected according to the manufacturer's instructions.

All users of respirators will be fit tested to ensure a proper face piece-to-face seal. Employees whose facial hair interferes with the face piece-to-face seal will not be allowed to wear negative-pressure air-purifying respirators.

All employees who are required to wear respirators will receive training in their use, selection and appropriate maintenance. Training will provide an opportunity for the employee to handle the respirator, have it fitted property, test the face piece-to-face seal, wear it in normal air, and wear it in a test atmosphere.

Silica Exposure Program

The purpose of this policy is to establish procedures to protect employees from the health hazards associated with exposure to airborne crystalline silica generated by various construction activities. Due to the amount of work we do with concrete and masonry on almost any project; our workers have the potential for silica exposures through abrasive blasting, chipping, hammering, sawing, grinding or demolition of concrete.

Silicosis is a lung disease marked by hardening of lung tissue and symptoms such as shortness of breath, possible fever, fatigue and eventual respiratory failure. Silicosis also renders a person more susceptible to disease of the lungs, such as tuberculosis. Where there is concrete, there is a potential silica exposure so it is essential to monitor our work activities and take the necessary corrective actions to protect our employees.

Responsibilities

Supervisor

Project Supervision shall evaluate all work activities for silica exposures, institute engineering controls as a first line of protection to reduce silica exposures, institute all administrative/work practice controls to reduce silica exposures when feasible and when engineering controls have been explored and ruled out. Institute the use of respirators to reduce exposures when the above mentioned controls fail to reduce silica exposure levels, provide training identified in this policy when employees are exposed to silica hazards and provide necessary respirator protection as well as training in its proper use, when deemed necessary.

Employees

The workers shall follow all work plans that identify engineering and administrative work practice controls to reduce their exposure to crystalline silica. They will wear respiratory protection to reduce their exposure to crystalline silica when deemed necessary by their supervisor and not eat, drink, use tobacco products or apply cosmetics in areas where there is dust containing crystalline silica.

Program Activities

Crystalline silica exposures must be maintained below the OSHA PEL of 10mg/m3 Percentage Quartz) +2. Historical data from similar operations producing silica exposure can be used as exposure monitoring when feasible. Assessment of worker exposure to reparable crystalline silica dust during various tasks associated with concrete finishing and demolition activities is performed annually by an Industrial Hygienist. Specific job tasks monitored include grinding, patching, chipping, demolition, segregation, stockpile, and loading of concrete rubble.

When it has been determined that employees will be exposed to crystalline silica in excess of the PEL, engineering controls will be used as a first line of defense. Engineering controls include, but are not limited to the use of dust collection systems which are available for many dust generating tools and equipment, using wet methods to keep dust particles down, use abrasives with a low silica or no silica content or using local exhaust ventilation to prevent dust from being released into the air. When engineering controls cannot be utilized or are not effective to sufficiently reduce exposure to the inhalation of silica, administrative controls will be used when feasible to reduce the time of exposure for the employees where work crews are of sufficient size, the pool of workers skilled in the operation of applicable tools, and job duration is sufficient to accommodate worker rotation, develop a program to reduce the exposure time of individual workers to silica.
Work tasks that must be monitored for crystalline silica exposure include by are not limited to:

- Jack hammering and chipping
- Grinding concrete
- Tunneling
- Sandblasting
- Dry sweeping or blowing concrete debris, sand or rock dust
- Demolition of concrete/masonry structures
- Crushing, loading, dumping rock or concrete
- Saw cutting concrete or rock

Respirators

Respirators will be selected according to the type of activity for which they will be used and the type of potential air contaminants associated with these activities. Only NIOSH/MSHA approved respirators will be used. All respirator protection equipment will be used in accordance with the manufacturer's recommendations. In areas in which maintenance and sanitation services are unavailable or respiratory usage is limited, disposable respirators will be used. Non-disposable respirators which are used exclusively by one person will be maintained and cared for by the wearer. All non-disposable respirators which are used by more than one person will be cleaned and sanitized between each use. Chemical cartridge respirators will be stored in airtight, labeled containers between each use. All other respirators will be stored in a clean and sanitary manner and labeled with the wearer's name. Disposable respirators will be used until the cartridge or filter media requires replacement or when the face piece is dirty.

Respirators will be inspected by the wearer prior to each use. Supervisors on jobsites where respirators are used will verify that appropriate respirator protection is being used, inspected, and maintained properly. Non disposable respirators will be inspected according to the manufacturer's instructions.

All users of respirators will be fit tested to ensure a proper face piece-to-face seal. Employees whose facial hair interferes with the face piece-to-face seal will not be allowed to wear negative-pressure air-purifying respirators.

All employees who are required to wear respirators will receive training in their use, selection and appropriate maintenance. Training will provide an opportunity for the employee to handle the respirator, have it fitted property, test the face piece-to-face seal, wear it in normal air, and wear it in a test atmosphere.

Select respirators based on the criteria identified in the respirator protection section of this manual.

Air Monitoring

After the initial assessment and institution of exposure controls, follow-up air monitoring will be conducted to assess the effectiveness of the controls put in place. In the event that the follow-up monitoring reflects that instituted controls have not yet reduced employee exposures, the operations will cease, be re-evaluated and alternative controls will be explored to reduce employee exposures to silica.

Training

Employees will be trained in the hazards of silica exposure, engineering and administrative/work practice controls, if any, that have been instituted to control silica exposures and PPE.

Appendix

Figure 1	JHA
Figure 2	Incident Package
Figure 3	DIA
Figure 4	Notice of EHS Non-Compliance Warning Letter of EHS Non-Compliance Written Notice of Temporary Job Suspension