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Balfour Beatty

SUBCONTRACTOR

Safety, Health, & Environmental Performance Requirements

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DEFINITIONS

BB: Balfour Beatty

Competent Person: A competent person is defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary or dangerous to employees. The Competent Person has authority to impose prompt corrective measures to eliminate these hazards. [Competent Person Form](#)

Contract Documents: contract documents include the owner-contractor agreement, conditions of the contract, plans, drawings, specifications, addenda, modifications, and changes, together with any other items stipulated as being specifically included.

Employer: This terms shall have the same definition of subcontractor for the purpose of this document.

Experience Modification Rating (EMR): a number used by insurance companies to gauge the past cost of injuries and future chances of risk. The lower the EMR, the lower the worker compensation insurance premiums will be. An EMR of 1.0 is considered the industry average.

Incident: An event with an unfavorable or potentially unfavorable outcome. Incidents may consist of an injury, illness, utility strike, first aid injury, property damage, near miss, etc.

J/AHA: Job/Activity Hazard Analysis (a document used to create a safe work plan for **all activities** conducted by a subcontractor on a project)

Owner: An entity who has a contract between themselves and Balfour Beatty.

PTP: Pre-Task Plan (a document used to create a safe work plan for a subcontractor's **daily activity**)

Project: The premises owned by the Owner subject to construction as described in the contract between the Owner and Balfour Beatty.

Project Manager: The BB designated representative functioning as the Project Manager for this project site.

Qualified Person: A qualified person is defined as a person designated by the employer who by reason of training, experience and education has demonstrated the ability to solve and resolve problems and, when required, is properly licensed in accordance with federal, state, or local laws and regulations. [Qualified Person Form](#)

Risk Manager: The BB designated representative functioning as the Risk Manager for this project site.

SH&E: Safety, Health and Environmental

Subcontractor: This term applies to all Subcontractors (all-tiers), Vendors, or Suppliers performing work under contract with Balfour Beatty.

INTRODUCTION

This document outlines general and specific safety, health and environmental contractual requirements for this project. Subcontractors are responsible for ensuring their employees are properly trained to carry out the rules and procedures required by this document. Subcontractors and their tiers are required to take action to eliminate unsafe acts of workers and unsafe/unhealthy working conditions.

Compliance with the following are a contractual obligation of the Subcontractors working on this project:

- Federal, State, Local Laws and regulations
- American Society of Mechanical Engineers (ASME),
- American National Standards Institute (ANSI),
- American Society for Testing Materials (ASTM)
- Manufacturer's recommendations

Conflicts between requirements shall be resolved by adhering to the more stringent requirement.

EXECUTION

Contracts with BB will require the subcontractor and their lower tiers to comply with BB's SH&E policies, procedures, and applicable federal, state, and local laws. Failure to comply with contractual obligations may be grounds for termination of the contract. For subcontractors with an EMR over 1.24, additional requirements may be added to their contract.

When a Subcontractor is notified by the BB Project Management Team of any noncompliance with the provisions of the Contract, the Subcontractor shall IMMEDIATELY correct the unsafe act or condition. If the BB Project Management Team becomes aware of any condition that poses a serious or imminent danger to the health or safety of the public, owners and their representatives, or the Subcontractor's personnel, the Subcontractor will be notified verbally followed with written confirmation, and shall require immediate implementation of corrective action(s). Should the Subcontractor fail to comply promptly, the BB Project Management Team may stop all or any part of the work being performed. When, in the opinion of the BB Project Management Team, satisfactory corrective action has been taken to correct the unsafe act or condition, work may resume.

The Subcontractor shall not be allowed any extension of time or compensation for damages by reason of suspension of work. The Subcontractor shall insert this clause, with appropriate changes in the designation of the parties, in all Trade, Supplier, and Vendor Contracts. At no time shall the Subcontractor and their sub-tiers be relieved of the responsibility to be aware of and correct any unsafe actions and/or unsafe conditions. If the Subcontractor fails to take corrective action, the BB Project Management Team may direct the corrective action to be performed by a third party with the cost of such action being withheld from the next progress payment and deducted from the Subcontractor's subcontract. If the Subcontractor fails to submit the required SH&E submittals or any other required reports within the time specified within these documents, the BB Project Manager may retain an amount equal to ten percent (10%) of the estimated value of the work performed during the month from the next submitted Progress Payment, except that such retention shall not exceed \$10,000, nor be less than \$1,000.

RELATED DOCUMENTS

The Subcontractor is responsible for knowing and abiding by the appropriate sections of these and any other applicable regulations and/or specifications:

- OSHA General Industry Safety and Health Standards (29CFR1910)
- OSHA Construction Industry Standards (29CFR1926)
- Cal/OSHA, Title 8, Division 1, Chapter 4, Subchapter 7, General Industry Safety Orders
- Cal/OSHA Title 8, Division 1, Chapter 4, Subchapter 4, Construction and Electrical Safety Orders
- National Emission Standards for Hazardous Air Pollutants (40CFR61)
- Environmental Protection Agency Final Rule (40CFR761)
- State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ for the General Construction Permit
- Federal Standard 313A - Safety Data Sheets, Preparation and Submission
- Record Keeping Guidelines for Occupational Injuries and Illnesses
- American National Standards Institute (ANSI) A10.33 "Safety and Health Requirements for Multi-Employer Projects"
- Manual on Uniform Traffic Control Devices (MUTCD), U.S. Department of Transportation, Federal Highway Administration
- Procedure for conducting Pre-phase Planning, Job/Activity Hazard Analysis (JHA/AHA) and Pre-Task Plan (PTP) (See Figure 5)
- (ANSI)/Scaffold Shoring & Forming Institute SC 100-5/2005
- ASME B30.26-2004
- ASME standards that are applicable to the equipment or operations.
- ANSI standards that are applicable to the equipment or operations.
- ASTM standards that are applicable to the equipment, operations or testing criteria.

Fifteen (15) days prior to the start of onsite activities, the Subcontractor shall submit the required SH&E submittals to the BB Project Manager or their designee for acceptance. The submittals may be in either hard copy or digital format. As a reference, please see the attached "[Subcontractor SH&E Submittal Checklist.](#)" For reviewing purposes, the submittals shall be provided to BB in the following format/file structure:

Required SH&E Submittals

1. Injury and Illness Prevention Program (IIPP)

The Subcontractor's written Injury and Illness Prevention Program shall meet the requirements set forth in [CAL/OSHA Title 8, Chapter 4, Subchapter 7, Section 3202, Injury and Illness Prevention Program \(IIPP\), General Industry Safety Orders.](#)

2. Site-Specific Safety and Health Program

Each Subcontractor shall prepare and submit a Site-Specific Safety and Health Program applicable to the project. Compensation for preparing a site specific Safety, Health & Environmental Program and for conforming to the provisions therein shall be considered as included in the prices paid for the various Contract items of work, and no separate payment will be made therefore.

The Site-Specific Safety and Health Program shall include at a minimum:

- Company Safety and Health Policy Statements which include Principal's Signature(s)
- Drug / Alcohol Free Workplace
- Injury / Illness/ Near Miss Incident / Utility Hit Reporting Procedures
- Emergency Procedures, Rescue, Evacuation, Injury Treatment Procedure, Medical Facilities name, location, and phone number(s)
- Code of Safe Work Practices (Subcontractors shall also comply with [BB's Code of Safe Work Practices](#))
- Fire Prevention
- Hazard Communication Program in accordance with the [Globally Harmonized System](#) requirements
- Hazard Recognition
- Fall Protection /Prevention Plan and Requirements
- Housekeeping / Orderliness
- Electrical Safety
- Lock-Out / Tag-Out (LOTO) Procedure
- Ladder / Scaffold Safety
- Hot Work Procedure
- Material Handling (Hoisting – Signaling, Rigging--Manual Personnel Lifting - Forklift)
- Personal Protective Equipment Requirements (PPE)
- Competent Person and/or Qualified Person Designation Acknowledgement Form
- Heat Illness Prevention Plan in compliance with CA Title 8 applicable regulations

When applicable, the Site-Specific Safety and Health Program shall also include:

- Confined Space Procedures
- Perimeter Guarding / Floor, Wall And Roof Openings
- Mobile Equipment Safety
- Signs, Barricades, Flagging
- Rigging /Signaling/ Crane Safety
- Trenching And Excavation Procedures
- Hazardous Material Handling

- Asbestos, Lead, Mold, etc. Abatement Issues
- Written Respiratory Protection Program
- Concrete pumping and placement safety procedures
- Tele-handler safety (forklift, aerial lifts, etc)
- Any other procedures specifically applicable to this project
- Storm Water Pollution Plan Program

3. Safety Data Sheets

The Subcontractor shall submit a current Safety Data Sheet (SDS) for any product that may contain harmful or hazardous materials or chemicals. The SDS shall be legible, not more than three (3) years old, or be accompanied by a letter from the manufacturer stating that the process and content have not changed. SDS's shall be made available to all employers on multi-employer work sites. SDS shall accompany Subcontractor's JHA/AHA where chemicals or hazardous substances may be used.

4. Job/Activity Hazard Analysis

The Subcontractor shall submit a Job/Activity Hazard Analysis (J/AHA) which covers all major work activities to be conducted by the Subcontractor on the project. The J/AHA shall be updated, amended, and re-submitted as necessary to be always current throughout the project. For a tutorial on J/AHAs, please click [HERE](#). Subcontractors may use their own [Job/Activity Hazard Analysis Form](#) if they meet or exceed BB's J/AHA form (see attachment).

As applicable, subcontractors must ensure that the following work activities are included on their J/AHA:

- Confined space work
- Work in excavations or trenches
- Work involving hazardous materials or chemicals
- Work on or near exposed, energized systems (ex. electrical, fluid, air)
- Lock Out Tag Out
- Work at elevated positions with potential fall hazards
- Scaffolding
- All work performed in areas accessible by or potentially affecting the general public
- Work requiring the use of respiratory protection
- Electrical – low and high voltage
- Crane work, including rigging and signaling
- Working around moving equipment/machinery

5. Traffic Control Plan

The Subcontractor shall submit traffic revision plans for all road, lane and pedestrian walkway closures, detours or deviations from existing roads, lanes and pedestrian walkways.

6. OSHA 30 Training Certificate

The Subcontractor's Superintendent/Foreman/Leadsperson assigned to the project shall have successfully completed one of the following and shall submit documentation thereof:

- U.S. Department of Labor sanctioned OSHA 30-Hour Construction Safety & Health Course
- EM385-1-1 40 hour course
- Safety Trained Supervisor Construction (STSC) certification through www.BCSP.org

7. Competent & Qualified Personnel Documentation

The Subcontractor shall submit a Competent and/or Qualified Person Acknowledgement Form (see attachments) for their "[Competent Person](#)" and/or "[Qualified Person](#)" for, but not limited to, the following activity categories:

- Asbestos

- Cadmium
- Lead
- Mold
- Welding and Cutting
- Ionizing Radiation
- Scaffolding / Platforms
- Excavations and Trenching
- Fall Protection / Prevention
- Respiratory Protection
- Concrete, Concrete Forms and Shoring, Precast Concrete and Tilt-Up
- Steel Erection
- Rigging
- Cranes and Derricks
- Lock Out / Tag Out (LOTO)
- Confined Space(s)
- Material / Personnel Hoists and Elevators
- Tunnels and Shafts, Caissons, Cofferdams and Compressed Air
- Blasting
- Hazardous Waste Operations and Emergency Response (HAZWOPER)
- Underground Construction
- Demolition
- Traffic Control

After the start of onsite activities, the Subcontractor shall submit the following daily:

1. [Pre-Task Plan](#) (see attachment)

A PTP is required to be completed at least once a day prior to starting any work activity. It shall be completed by the Supervisor/Foreman/Leadsman. PTPs must be completed by subcontractors, their sub-tiers at every level, select material delivery involving a labor component such as material movement, select vendor activities and inspection services. Upon completion of the PTP, it MUST be signed by all parties in attendance, posted in or adjacent to the work area and made readily available for the crew and/or BB staff. Failure to complete an adequately detailed PTP WILL result in a stoppage of work. A copy of the PTP MUST be forwarded to the Balfour Beatty project team at the start of the work day/shift. To watch a brief video on how to adequately complete a PTP, please click [HERE](#).

SITE SH&E TRAINING & MEETINGS

1. [Zero Harm & S.A.F.E. Training \(Safety Awareness for Everyone\)](#)

ALL Subcontractor Employees shall attend Zero Harm & S.A.F.E. training prior to working on the project. The training may take up to two hours and is held throughout the South West Division on a regular basis. Subcontractors may request to have the training delivered at their office—please contact the Safety, Health and Environmental (SH&E) Manager or BB Project Manager for scheduling.

2. [Zero Harm Pre-Construction SH&E Meeting](#)

The BB SH&E Manager, Project Manager and Superintendent may conduct a Zero Harm Pre-Construction SH&E Meeting to cover site-specific and general requirements as well as any items identified on the Project's Preconstruction Risk Assessment. The BB Project Manager will coordinate the Zero Harm Pre-Construction SH&E Meeting with the Subcontractors, Supplier and Vendors. This is a management level meeting and the Subcontractor is required to attend the meeting. No work, other than mobilization, may occur prior to the completion of the Zero Harm Pre-Construction SH&E Meeting.

2. Project Orientation

Prior to entering any work area on the project, all Subcontractor Employees shall receive a Project Orientation. The orientation may take up to 90 minutes. Subcontractors must coordinate the on-site arrival of their personnel with the BB Project Team to ensure personnel receive the orientation prior to working on site. The [Project Orientation Checklist](#) is attached to this document for reference.

3. Weekly All-Hands SH&E Meetings

All Subcontractors and their tiers must attend the Weekly All-Hands SH&E Meeting.

4. Weekly Tool-Box Safety & Health Meetings

The Subcontractor shall conduct its own Weekly Tool-Box Safety & Health Meetings. The Subcontractor shall retain on site and submit meeting minutes and attendance sign-in sheets to the BB Project Manager on the date of the meeting.

5. Other Safety & Health Meetings

The BB Project Manager and/or Superintendent may require Subcontractors to attend or have additional safety and health meetings. Additional meetings may be required as a result of special or changed conditions or to address safety and health audits/inspections and notices. Stand-down meetings fall under this category of “other” safety & health meetings.

6. Zero Harm Committee Meeting

Once per week, the site may have a Zero Harm Committee Meeting which consists of a job walk and discussion. Each Subcontractor on site is required to have a representative from their company at the meeting.

INCIDENT REPORTING REQUIREMENTS

INJURY / ILLNESS / UTILITY STRIKE / FIRST AID / PROPERTY DAMAGE / NEAR MISS /ETC

1. The Subcontractor shall follow all Incident Reporting Procedures.
2. The Subcontractor shall IMMEDIATELY notify the BB Project Manager, BB SH&E Manager and/or BB Superintendent of any incident.
3. The BB Project Manager, BB SH&E Manager and/or BB Superintendent shall be notified IMMEDIATELY if a Subcontractor employee is:
 - Hospitalized for a work-related injury or illness.
 - Involved in an occupational injury/illness resulting in days away from work, restricted duty or transfer, or an injury/illness that is OSHA Recordable.
 - Involved in a work-related fatality.
4. Within eight (8) hours of any injury / illness or near miss, utility hit, or any harm caused to the Public, the Subcontractor shall provide assistance to the BB Project Team for completing the [BB Incident Report Form](#) (see attachment).
5. The Subcontractor shall notify the appropriate OSHA organization within 8 hours of a fatal injury or when three or more employees are hospitalized overnight as a result of one incident requiring its employee(s) to be hospitalized for more than 24 hours. Documentation of whom the Subcontractor contacted and what was discussed shall be provided to the BB Project Manager, BB SH&E Manager and/or BB Superintendent.

POST INJURY-ILLNESS REQUIREMENTS

1. [On-Site Health and Safety](#) is the preferred vendor for non-emergency medical treatment on BB projects.
2. If injured/ill worker(s) are sent off site for treatment, they must be accompanied by their supervisor or a designee.
3. Attempts must be made to avoid prescription medications and being placed off work.

4. A Work Status Release/Report must be acquired from the treatment provider and a copy given to the BB Project Manager or their designee within 24 hours.
5. Injured/ill persons are required to return to work when placed on restricted/ modified duty. Accommodations must be made to meet the worker's restrictions.
6. After any incident, involved party(ies) will be required to undergo drug and/or alcohol screening and provide results to the BB Project Management Team.

INSPECTION REQUIREMENTS

The subcontractor is required to inspect their work areas and activities daily. Hazards identified must be corrected immediately and reported to BB Project Management Team as applicable. Inspections are to be documented and available upon request for review by BB Project Team Members. As a recommendation, subcontractors may use the attached [Project SH&E Checklist](#) for documenting observed hazards and corrective actions taken. Subcontractors are responsible for taking prompt action to correct any SH&E hazards that they have created or exposed their personnel to.

If a subcontractor fails to correct known hazards, the disciplinary action program will be implemented. Work which is not in compliance with applicable SH&E standards may be stopped until corrective action is implemented. Any SH&E issues that cannot be promptly corrected by the subcontractor shall be IMMEDIATELY brought to the attention of BB Project Team Members.

Any safety or health issues that cannot be promptly corrected by the Subcontractors shall be IMMEDIATELY brought to the attention to BB Project Manager/Superintendent/Safety Manager.

MANDATORY COMPLIANCE AND DISCIPLINARY REQUIREMENTS

All personnel are required to work safely as a condition of employment, which includes strict compliance with:

- Requirements contained within this document.
 - Requirements issued verbally.
 - Safety, health and environmental regulations.
 - Manufacturer requirements.
 - Safe work practices.
 - The avoidance of "horseplay".
 - Exercising reasonable judgment in the safe performance of work duties.
1. BB reserves the right to suspend or remove any employee of any Subcontractor or their tier-subcontractors from this project for failure to comply with safety, health and environmental requirements.
 2. Personnel responsible for enforcing the above provisions include the Subcontractor's Supervisor and the BB Project Manager/Superintendent/Safety Manager.
 3. Disciplinary actions may include the following and may be documented on the attached [Disciplinary Action Form](#):
 - Verbal warnings
 - Written warnings
 - Removal from the Project
 4. Any of the aforementioned disciplinary actions may be enforced at any time based upon the seriousness and circumstances of the safety rule violation. Following the issuance of disciplinary action, the Supervisor of the employee shall meet with the employee to discuss the infraction and inform the individual of the rule or procedure that was violated and the corrective action to be taken.

SITE SAFETY AND HEALTH REPRESENTATIVE

A full-time Safety and Health Representative MUST be assigned to the project for every 25 workers on site. However, based on the complexity of the scope of work and/or the Subcontractor's EMR history, a full-time Safety and Health Representative may be required for less than 25 workers. When applicable, the Subcontractor Site Safety and Health Representative shall be onsite during all scheduled work hours.

The Subcontractor shall submit the name(s), qualifications and resume of the Subcontractor's proposed Site Safety and Health Representative to the BB'S SH&E Manager, Project Manager and Superintendent for approval fifteen (15) days prior to the start of onsite activities. The documentation shall include, but not be limited to specific safety and health classes and courses the proposed Site Safety and Health Representative has completed. It is the Subcontractor's sole responsibility to determine the safety and health training has been provided by industry recognized and qualified instructors.

The Site Safety and Health Representative shall have a minimum of five years of experience in construction, possess appropriate skills and experiences related to construction occupational safety and health and have the authority to take prompt corrective measures to correct at risk worker behaviors and/or unsafe working conditions, and also specific knowledge and expertise in how to prevent their recurrence.

At the discretion of the BB Project Manager, the Subcontractor Site Safety and Health Representative duties may be shared with other duties. However, safety and health responsibilities shall take precedence over any other assigned duties. The Site Safety and Health Representative shall be responsible for, but not limited to:

- The safety and health of the personnel of the Subcontractor and their tiers, suppliers, and vendors.
- Implementing the Subcontractor's Site Specific Safety and Health Program and Injury, Illness & Prevention Program.
- Delivering Project Orientation to personnel on the project under the Subcontractor's contract.
- Ensuring employee compliance with all project requirements.
- Completing and documenting SH&E inspections of the Subcontractor's work area.
- Conducting the Subcontractors' weekly tool box safety meetings.
- Submitting reports and documentation.
- Implementing and overseeing provisions for protection of the public.

SUBSTANCE ABUSE REQUIREMENTS

The Owner, BB and their representatives have a vital interest in maintaining safe, healthful and efficient working conditions for all Subcontractors', tiered subcontractors, suppliers' and vendors' employees.

Possession or use of illegally obtained and/or illegal drugs or a third person's prescription medication and the possession of alcohol are prohibited on the jobsite. All Subcontractors must have a drug policy that is substantially similar to that of BB's. Pursuant to the applicable jurisdictional laws and the BB Drug and Alcohol Program, BB reserves the right to test any employee of any Subcontractor at any time. The BB Drug and Alcohol program is available upon request from the Project Manager. Alcohol, illegal drugs or substance abuse poses a serious threat to workplace safety and health. Employees who abuse alcohol and/or drugs are a danger to themselves, co-workers, other Subcontractors and the public.

Subcontractors shall maintain an Alcohol and Drug Free Workplace. This will include requiring ALL EMPLOYEES IMMEDIATELY before they are assigned to this project to pass a National Institute on Drug Abuse (NIDA) approved substance abuse test with a negative test result. Alcohol and substance abuse testing is required for employees assigned to this project prior to the start of work and IMMEDIATELY following all injury/illness incidents including near hits or misses, and fitness for duty exams for employees returning to work from a non-work related injury/illness. All employees with positive test results will be barred from working at this project.

Head Protection

ANSI Z89 HEAD PROTECTION IS REQUIRED 100% OF THE TIME.

Employees shall wear hard hats that are in good condition and meet legislative jurisdictional requirements. Bump hats, metal hard hats, and cowboy-style hard hats are not permitted.

Welding hoods must be worn with a hard hat.

Alteration/painting of hard hats is prohibited. Hard hats shall be worn in the manner prescribed by the manufacturer. Only head apparel designed to be worn under a hard hat will be allowed.

Hard hats will not be required to be worn while personnel are inside the office trailers or inside vehicles/equipment with all windows and doors/hatchways closed, or while within fenced-off designated break areas that have been sanctioned and authorized by BB.

Hearing Protection

Hearing protection devices shall be used when noise level are at 85 dBA or above. Typical rule of thumb is employees should be using hearing protection if they are unable to hear normal conversation within three feet.

Eye and Face Protection

ANSI Z87.1 EYE PROTECTION IS REQUIRED 100% OF THE TIME.

ALL COMPONENTS OF PRESCRIPTION GLASSES USED FOR EYE PROTECTION INCLUDING SIDE SHIELDS MUST MEET ANSI Z87.1 STANDARD.

OVER-THE-GLASS SAFETY GLASSES OR GOGGLES ARE REQUIRED FOR PRESCRIPTION GLASSES THAT DO NOT MEET ANSI Z87.1 STANDARD.

Workers must wear properly fitting eye and face protection. Only clear or indoor/outdoor safety glasses are allowed during interior work. Face and eye protection shall be kept clean and in good repair.

Face protection must be worn during:

- Grinding;
- Chipping;
- Cutting;
- Splashing;
- Or any other work that causes a projectile hazard.

During gas welding and cutting operations, tinted safety glasses are inadequate—appropriate eye protection for welding operations are required. Cutting goggles must be worn with oxyacetylene cutting activities.

When using lasers, appropriately rated laser-safety goggles/glasses must be worn for the wavelengths of laser used.

Hand and Arm Protection

Cut-resistant gloves shall be worn at all times by all persons on site except when advised against by a tool manufacturer for reason that gloves may create a greater hazard (i.e., entanglement in moving parts, belts, or shafts).

All gloves shall have a minimum cut level of A3 (ANSI Cut Level 3 at 1,000-1499 grams to cut).

Each task shall be analyzed to determine the appropriate type of glove needed since specialty gloves may be required for exposure to sharp materials, chemicals, hot work, electricity, etc.

All gloves must be in good condition and fully intact -- the fingers of gloves may not be cut off.

When arms may be exposed to sharp objects, adequate protective sleeves must be worn (i.e., drywall track, sheet metal, metal framing, demo work, etc.)

Body Protection

Employees shall come properly dressed to perform work activities with long pants and shirts with at least four-inch sleeves. Shorts and sleeveless shirts are prohibited at all times.

Additional body protection may be required depending on the task and potential hazards. For example, a protective apron is required by the operator during mortar mixing operations.

Personnel are required to wear high visibility clothing. Workers performing flagging operations must wear the proper class high visibility clothing based on the traffic conditions. During welding, cutting, or other hot work activities, personnel engaged in the hot work task are exempt from wearing high visibility clothing that is not rated for hot work.

All Subcontractors' employees shall wear high visibility apparel meeting at minimum, ANSI/ISEA 07-2004 Performance Class 2 Requirements during hours of light and ANSI/ISEA 07-2004 Performance Class 3 Requirements during hours of darkness. The apparel background material color shall be fluorescent yellow-green or orange (if required.) When choosing color, optimization of color conspicuity between the wearer and work environment shall be considered.

If any or all of the following conditions exist, a determination shall be made by the Project Manager and Subcontractor based on a risk assessment, as to whether Performance Class 3 high visibility apparel is needed for higher visibility of workers. If so, they shall be worn by Subcontractor employees when:

- Employees are exposed to vehicular or equipment traffic in excess of 45 MPH.
- Reduced visibility conditions exist due to weather conditions, illumination, or visually complex backgrounds where ambient visibility is less than 50 feet or employees are performing tasks which divert attention from approaching vehicular traffic, traveling in excess of 45 MPH, as posted.

Foot and Leg Protection

All personnel must wear sturdy boots with ankle protection and hard soles. No running shoes of any kind are permitted on work sites. NO SAFETY-TOE TENNIS SHOES ALLOWED.

Personnel exposed to struck-by or crushing hazards that may potentially injure their feet must wear metatarsal protection (i.e., the use of a whacker or jackhammer requires shoe covers).

Personnel exposed to chemical hazards that may potentially injure their feet must wear impervious shoe protection.

Full-length protective chaps are required to be worn when using chainsaws, demo/chop/cut off/gas-powered saws.

GENERAL SITE REQUIREMENTS

1. The Subcontractor shall take all precautions necessary to prevent injury/illness to the public, or damage to property of others. For the purposes of this document, the public shall include all persons not employed by the Subcontractor. When the construction area is adjacent to public occupied areas, the Subcontractor shall be responsible for conducting air monitoring, inside the public occupied areas, for airborne contaminants (chemicals, asbestos, welding fumes, lead dust/fumes, mold spores, nuisance dusts, etc.), vibrations generated by construction activity. The Subcontractor shall provide a qualified, independent testing consultant to conduct such air monitoring.
2. The Subcontractor shall ensure that monitored levels of chemicals and/or dusts or other contaminants are below established Permissible Exposure Limits as set forth in 29 CFR 1926, Subpart D. The Subcontractor shall submit air monitoring test results to the BB Project Manager within seventy-two (72) hours after testing.
3. The use of equipment that generates harmful fumes is prohibited inside buildings after close-in, unless scrubbers and/or ducted ventilation are used.
4. Adequate ventilation and monitors are required when using propane/gas-fired devices indoors or in confined spaces.

5. The Subcontractor shall prevent building materials, debris, excavated and / or backfill material, etc. from migrating into or onto public or private areas.
6. The Subcontractor shall provide temporary lighting where required to maintain illumination levels in work areas, storage areas and walkways as set forth in Title 8, Chapter 4, subchapter 4, Article 3, Section 1523 of the California Construction Safety Orders. Subcontractors shall be required to provide task specific lighting for areas not meeting the above site requirements.
7. Specifically prohibited from being brought onto this project are the following: pet animals of any kind, radios, including head set radios, Tape/CD/DVD/Electronic Chip players, iPods, MP3 players, televisions or microwave ovens. *Exception:* TV's and microwave ovens will be in a controlled environment such as a jobsite trailer. Any variance from this must have the written approval of the BB Project Manager, BB SH&E Manager and/or BB Superintendent
8. All impalement hazards must be guarded against any object that is of sufficient shape and dimensions that in the event a worker falls onto or strikes against it could result in that object being driven or forced vertically or horizontally into the employee's body. A partial listing of common impalement hazards that must be guarded against are: reinforcing steel, steel stakes or rods, anchor-bolts, wooden survey stakes, small diameter pipe (less than 4 1/2 inches) and electrical conduits. Simply stated, when an object has the potential of impaling workers, that object must be properly guarded. For example, rebar caps, stake caps, wooden blocks, etc. Rebar caps must fit correctly without being forced into place. Damaged caps are not permitted.
9. Falling materials pose a significant hazard to all individuals on this site. Access to areas barricaded by chains, warning signs, and red or yellow tape will not be allowed without permission from the BB Project Manager, BB SH&E Manager and/or BB Superintendent Subcontractor shall be fully responsible to erect the most robust system of exclusion as necessary to prevent workers from entering this exclusion zone. Yellow or red barricade tape is not permissible for exclusion zones.
10. Worker visibility is important in all construction areas. Fluorescent clothing, vests, flags, cones or barricades must be used at this site to establish a visible safe work zone. Workers must be assigned to direct traffic as needed.

SCOPE-SPECIFIC REQUIREMENTS

AERIAL WORK PLATFORMS

Precautions

- Only authorized and qualified persons shall operate an AWP.
- Operators must be familiar with emergency controls and operation.
- The Manufacturer's Operation and Safety Manual shall be located in a weather resistant compartment on the unit.
- Operators must read, understand and comply with the Manufacturer's Operation and Safety Manual and applicable Federal, State and Local regulations.
- Operators must use the AWP according to manufacturer's instructions.
- Inspections shall be conducted according to manufacturer's instructions at the beginning of each shift. If any malfunctioning devices/controls, warning devices, safety devices, damaged equipment, missing or illegible decals and placards are discovered during this inspection, the unit must be taken out of service until repairs are completed.
- Daily inspections must be documented. For a sample checklist, please see attached [AWP Daily Inspection Checklist](#).
- Immediately before operation, the path of travel and work area must be checked for overhead obstructions, holes, slopes, excavations, bumps, ground conditions, floor obstructions, debris, power lines, and other potential hazards. All hazards discovered must be eliminated or protected prior to operation.
- Unstable objects such as tools, materials and debris shall not be allowed to accumulate on the platform's floor.
- At least one fire extinguisher 3A:40:BC (UL rating) must be located within 5' of the control panel.
- When operating aerial work platforms near or over water, lift occupants are not required to tie off because in the event that an error occurred that resulted in the employees being in the water, being tied-off would exacerbate the drowning hazard. Fed OSHA Subpart CC 1926.1431 (K)(10)(i). Letter of interpretation amended June, 18 2014. Letter # 20090601-9068.

Operating Requirements

- AWP's shall only be used for positioning personnel, their tools, and equipment.
- Operators shall use wheel chocks when using or parking an AWP on an incline.
- Operators shall bring the AWP to a complete stop before using cell phones or two way radios.
- Traveling with the platform elevated should be minimized unless a spotter is used. Ensure that traveling speed is at the manufacturer's "creep" speed or not more than 0.5mph where manufacturer's speed is not known.
- A spotter is mandatory when view is obstructed by load and during travel of aerial work platforms. Scissor lifts require spotters during movement in congested and/or hazardous areas.
- Ensure that the AWP travels on gradients within the manufacturer's recommendations. In the absence of such recommendations, ensure the gradient is not over 3 degrees.
- Aerial baskets shall not be supported by any structure or object at any time.
- Operators shall not "slam" a control switch or lever through neutral to an opposite direction. Switch and levers shall always be returned to neutral and stop before moving the switch or lever to the next function.
- Outriggers on an AWP must be retracted before movement.
- Do not use the rails of an AWP to transport materials unless approved by the manufacturer.
- AWP's shall never be used in vehicular travel paths without hard barricades or BB approved administrative controls in place to protect the unit from inadvertent contact.
- Ground personnel shall not use ground controls with personnel in the platform except for emergencies.
- Operator's must lower the platform and shut off all power before leaving an AWP.
- When lifts are used inside buildings, consideration must be given to carbon monoxide emissions.
- Lifts must not be operated while batteries are being charged.

Fall Prevention

- Prior to operation, ensure all gates and rails are fastened and secured in their proper position
- Enter and exit platforms through the gate
- Operators shall face the AWP and maintain three points of contact when entering/exiting platform
- Use extreme caution when entering or leaving the platform
- Operators may only exit an elevated platform if it is an emergency or approved by BB and the manufacturer. When exiting an elevated platform, 100% fall protection is required.
- Never climb an AWP arm or boom
- Fall Protection equipment shall be used according to manufacturer's recommendations
- Use manufacturer's approved fall protection anchorage points when attaching a lanyard.
- In the Southwest Division, personnel are required to tie off in aerial lifts that have anchorage points. If aerial lifts are not equipped with anchorage points, the lift must be replaced with one that is equipped with manufacturer-installed anchorage points. Restraint lanyards must be used to tie off to anchorage points.
- Keep oil, mud, and slippery substances cleaned from footwear
- Ensure that the platform is fully lowered when exiting the platform
- Operators shall always stand firmly on the floor of the basket and never sit or climb on the edge of the basket, or use planks, ladders or other devices to obtain additional height

Electrocution Prevention

Operators shall maintain distance from electrical lines, apparatus, or any energized (exposed or insulated) parts according to the following. Electrical line sway, tools, and equipment must also be taken into consideration when determining the Minimum Safe Approach Distance.

Voltage Range (phase to phase)	Minimum Safe Approach Distance
0 to 50KV	10'
Over 50KV to 200KV	15'
Over 200KV to 350KV	20'
Over 350KV to 500KV	25'
Over 500KV to 750KV	35'
Over 750KV to 1000KV	45'

Electrical lines >50,000 volts require one foot additional clearance for every additional 30,000 volts

Tip-Over Prevention

- AWP's shall not be operated in high winds as defined by the manufacturer in the Operation and Safety Manual
- Operators shall ensure that the ground conditions are adequate to support the maximum tire load indicated on the tire load decals located on the chassis adjacent to each wheel
- Tire pressure shall be checked prior to every shift
- Operators shall not operate a raised AWP on a slope, uneven, or soft surface
- Material and equipment must be kept within the confines of the platform at all times
- Rigging shall not be used from an AWP to pick up and move material
- Operators shall not secure an AWP to an adjacent structure
- Safe working load limits and platform capacities shall not be exceeded
- Extreme caution must be exercised when traveling down a slope

Crushing/Collision Prevention

- All telescoping/articulating aerial work platforms (telescoping boom lifts) shall be equipped with secondary guarding that provides crush/entrapment protection.
- Hardhats must be worn at all times

- Operators shall keep their body and extremities inside the platform and off the railing during operation
- AWP's must not be operated when the operator's vision is obstructed
- Operators shall always face in the direction of travel
- Operators shall always check clearances above, on sides, and bottom of the platform before raising and lowering the platform
- Operators must take appropriate measures to protect pedestrians below overhead work by establishing a controlled access zone.

Personal Protective Equipment Requirements

- Workers using AWP's should wear personal fall protection equipment in the form of a full body harness and lanyard attached to the manufacturer's prescribed anchorage point. The lanyard should be configured to prevent excess slack and must not be attached to an adjacent pole, structure, etc.
- Operators shall use personal fall protection equipment according to manufacturer's recommendations.

Training Requirements

- Contractors whose personnel operate AWP's must provide adequate documentation of training.
- Operator training must cover at a minimum:
 - Use and limitations of the controls in the platform and at the ground, emergency controls and safety features
 - Control labels, instructions and warnings on the machine
 - Rules of their employer and governmental regulations
 - The care and safe use of approved fall protection
 - Enough knowledge of the mechanical operation of the AWP to recognize a malfunction or potential malfunction
 - The safest means to operate the machine where overhead obstructions, other moving equipment and obstacles depressions, holes and drop-offs exist
 - Means to avoid the hazards of unprotected electrical conductors
 - Specific job requirements or machine application (hands-on training with specific model of AWP)
 - Reading and understanding the Operation and Safety Manual
 - The nature of hazards associated with the equipment such as trip and falls, electrocution, tipping, and crushing and collision

BIOLOGICAL HAZARDS (SNAKES, INSECTS, ANIMALS, ETC)

1. Personnel at the site should avoid coming in contact with snakes, ticks and stinging insects that may from time to time be present. Heavy boots and clothing covering the trunk, arms and legs are required for activities taking place in potentially snake infested areas and along project right-of-ways.
2. Insect repellent or other preventative measures should be used when necessary. The wearing of high top boots with hard soles and long sleeved shirts is recommended. Long pants are mandatory.
3. Insect stings or animal bites must be treated like any other safety incident and reported and treated if necessary. Testing for rabies may be required.
4. All wild animals are to be avoided if possible. Unless an animal presents an immediate hazard to humans it shall not be harmed.

CONCRETE & MASONRY

Subcontractors who will engage in concrete and masonry work shall submit adequate safety documentation including:

- Job/Activity Hazard Analysis that includes thorough provisions for the protection of personnel and the public from hazards associated with their work.

- Respiratory Protection Program, Fit Testing, Training, etc.
1. All vertical and horizontal rebar, form stakes, conduit, or small pipe stub-ups shall be capped or otherwise protected from exposing personnel to impalement and injury. Rebar caps must fit correctly without being forced into place. Damaged caps are not permitted.
 2. Prior to cutting concrete, Underground Utility and Excavation procedures shall be followed to prevent striking a utility or post-tensioned cable(s).
 3. A transition cover or back end cover shall be used on the concrete pump.
 4. Footing pads shall be placed under outriggers of concrete pumps that are adequate to support the load of the outrigger. The underground structure and/or ground conditions should be evaluated before setting a pump. Outriggers shall be fully deployed where feasible.
 5. Double ended hoses must not be used as a whip hose off the boom of a concrete pump.
 6. Velocity reducers or S tubes must not be placed on the whip hose since they may pose a struck-by hazard if the whip hose jerks.
 7. Prior to operations where a boom will be used, overhead utility hazards must be reviewed and controlled.
 8. Dead man controls shall be provided and maintained in an operable condition on rotating-type, powered concrete trowels.
 9. Mixing machines must have guards in place to prevent personnel from being caught in machinery.
 10. Concrete buggy handles must not extend beyond the wheels on either side of the buggy.
 11. Concrete buckets must be equipped with a device that will allow an employee to operate it without being exposed to the load. Buckets must also be equipped with safety devices to prevent premature or accidental dumping, and ensure that the release is self-closing.
 12. When feasible, mechanical screeds should be used for finishing operations.
 13. Exclusion/controlled access zones must be established prior to the construction of a masonry wall and shall be established on the side of the wall that is un-scaffold. The width of the zone shall be equal to the height of the wall to be constructed plus four feet (measured perpendicular from the base of the wall on the un-scaffold side). Entry must be restricted to authorized personnel. Bracing shall remain in place until the wall has been tied into the structure.
 14. When tensioning or cutting slabs with Post-Tension Cables, the area should be kept clear of personnel. Also, personnel engaged in tensioning must keep clear of the area behind the jack. Signs and barricades shall be erected to limit employee access to the post-tension area during tensioning operations.
 15. Follow safe rigging practices when handling concrete buckets.
 16. Inspect the area before using bull floats for energized equipment or power lines nearby that the handles could touch.
 17. Pre-fabricated forms and form making material will be stacked neatly at all times. When stripping concrete forms, all material will be immediately removed and stacked in an orderly manner. Forming material or debris shall not present a hazard due to protruding nails or blocked walkways and aisles. Rebar, tie-wire and other debris shall be removed from the work area daily.
 18. No employee is allowed to ride a concrete bucket.
 19. Spotters and/or back-up alarms must be used when backing trucks or equipment.
 20. Ensure coiled wire mesh is adequately secured to prevent uncoiling.

21. Reinforcing steel and forms for walls, piers, columns, stairs and similar structures are adequately supported to prevent overturning and collapse.
22. Shores must be secured from displacement.
23. Finishers shall wear kneepads and gloves when the concrete is hard. When in a plastic state, impervious gloves should be worn when hand-finishing concrete.
24. Workers that are exposed to wet concrete and/or masonry dust, who operate vibrators, pump nozzles and concrete buckets will wear appropriate eye, hand, and foot protection. It is highly recommended that long sleeve shirts, aprons, and face shields be worn to protect against exposure of concrete to the bare skin and the possibility of concrete burn and contact dermatitis.
25. Protective clothing needs to be worn, and care needs to be taken to avoid contact with wet concrete. If clothing against the skin gets wet with concrete, it should be removed as soon as possible.
26. Workers engaged in vertical rebar assembly shall comply with the project's fall protection rules. Positioning devices alone are not approved fall protection, but can be used in addition with personal fall protection equipment.
27. When using a gas-powered cut off saw (typically used to cut block), chaps must be worn. For example, [these chaps](#) have been proven effective.
28. Respirators must be maintained and worn properly if exposed to dust. Operations where personnel are exposed to dust may consist of pouring bags of dry cement/mortar/grout/etc, mixing, cutting, grinding, and chipping.
29. Dust shall be controlled with wet methods as feasible to prevent exposing personnel and members of the public within or adjacent to the work area.
30. For reference, subcontractors may use the attached "[Concrete Pumping Checklist](#)" and "[Coring and Saw Cutting Checklist](#)."

CONFINED SPACES

Subcontractors who perform work in confined spaces shall comply with [California's Confined Space Standard](#) and shall submit the following documentation to the BB Project Team for review and approval:

- Site-Specific Confined Space Program (including rescue and emergency procedures)
- Job/Activity Hazard Analysis
- Proof of personnel training
- Competent Person experience form

Subcontractors shall have a confined space competent person on site during all confined space work. Subcontractors shall have adequate equipment available as needed such as ventilation fan(s), life lines, lanyards, retrieval equipment, PPE, monitoring equipment, lighting equipment, communication equipment, Lockout/Tagout devices, barricade equipment, firefighting and prevention equipment, permit documentation, other equipment required for the work.

Subcontractors shall conduct fit testing and medical evaluation of all their employees who are required to use respirators and/or self-contained breathing apparatus (SCBA).

Subcontractors shall determine confined spaces to be free of dangerous gases as indicated by an approved testing device prior to entering the space. Tests are to be repeated and documented at regular intervals to ensure that dangerous gases are not collecting in the confined space. Proof of current air test device certification and calibration shall be readily available upon request.

Subcontractors shall provide proper ventilation as required for their employees during any work activities in the confined space. If space is identified to have explosive, fire, or asphyxiation hazards over the OSHA action level or permissible exposure limit, a full permit-required confined space program/entry must be implemented.

Permit-required confined space entry shall be conducted under a permit in accordance with local, state, and federal regulations. Subcontractors shall provide a copy of the permit to the BB Project Team. Upon completion of the entry, the permit shall be closed/signed-off by the competent person. For reference, please see the attached "[Confined Space Entry Permit.](#)"

CRANES

Lifting Operations

Cranes fabricated/erected on site will have a third party crane inspector on site during the fabrication, assembly and erection. Cranes delivered to site ready for work must provide a current annual inspection performed by a third party. All crane operators must have, a CCO, NCCCO or equivalent certification. Operators must have had a drug test within 7 days of arrival to the project site.

Lift Categories

In order to categorize and specify requirements for safe lifting operations, all lifts will be categorized as "Standard", "Critical", or "Engineered" lifts. Project management, rigging superintendent, or lift specialist may move a lift into a more stringent category. Reasons for this may include:

- A lift that may involve a potential risk to human safety;
- Complexities of the lift operation;
- Operational considerations concerning risk management of the lift; and
- Environmental factors or administrative considerations.

Standard Lift Criteria

All lifts that are not categorized as critical or engineered will be classified as standard except for personnel basket lifts.

Critical Lift Criteria

Critical lifts with mobile cranes can be extremely hazardous and require special care and attention. Before attempting lifts in this category, the project manager or superintendent must verify that a properly documented lift plan is prepared by a qualified person. The crane must be provided with a wind anemometer (or access to site wind speed indicator). The weight of the lifted object is verified prior to a critical lift.

Critical lifts include at least one of the following criteria:

- Any lift exceeding 75% of the machine's maximum chart capacity at the specified lifting radius;
- Lifts where loads must be maneuvered over existing facilities or where the boom or load does not maintain a minimum safe distance to objects as required by code and operating conditions at any stage during the lift operation;
- Lifts that require unusual or complicated rigging and/or nonstandard crane configurations;
- Lifts performed on undesirable ground conditions or during adverse weather conditions;
- Lifts where cranes operate from barges;
- All lifts requiring the coordination of multiple (2 or more) cranes working in unison, unless otherwise given written approval by district management;
- Any lift involving two cranes lifting the same load simultaneously where the load on any one crane during its entire lift operation may exceed more than 75% of that crane's lifting capacity as measured on the lifting chart; and
- All lifts where a crane must travel with a suspended load above 50% of the crane's capacity.

Engineered Lift Criteria

Engineered lifts with mobile cranes are defined as any lift exceeding 90% of the machine's maximum chart capacity at the specified lifting radius. Engineered lifts are strongly discouraged.

Any lift over 95% of the machine's maximum chart capacity must be accompanied by notification to the operations manager and division president.

Before attempting lifts in this category, the project manager or superintendent must verify that a properly documented lift plan is prepared by a qualified individual and is approved by a professional engineer. Additionally, the lift operation must be attended on site by a qualified person.

Crane Pick Plan Requirements:

All crane activities require a documented pick plan. Contractors may use their own Pick Plan format, but it must contain the same elements, at a minimum, as the attached [Crane Pick Plan](#).

Pre-Lift Meeting Requirements:

A pre-lift meeting will be held **two weeks prior to** crane activities. The attendees will consist of the workers and supervision involved in the lift. During the meeting, the Lift Plan and responsibilities will be reviewed.

General Crane Safety

Cranes shall always be operated within the manufacturer's specifications and take into consideration the following elements:

- Proximity to power lines;
- Proximity to other cranes or structures;
- Wind velocity;
- Temperature extremes;
- Ground conditions;
- Level of crane;
- Boom angle and working radius;
- Weight of load including rigging; and
- Proximity of workers.

Loads must never be swung over personnel or the public. Exclusion/controlled access zones must be established to control foot traffic.

Operators shall only take signals from the designated signaler identified during the pre-lift meeting. If the operators do not have a clear view of the designated signaler, they must use a radio and designated radio channel.

The operator of a crane that is lifting a load must verify the hoisting line is in a vertical position over the center of gravity of the load unless accounted for by the appropriate Lift Specialist (as in the case of fleeting of the load line). Any side load on a boom/jib shall be limited so that it is always within the Manufacturer's specifications.

Baskets/containers that are hoisted must be designed and engineered for that purpose.

The operator shall not leave the controls while a load is suspended except in the case of an emergency that requires evacuation of the operator where the operator shall secure the load before leaving.

All loads shall be free and clear of obstructions to avoid the possibility of shock or impact loading of the crane.

No hoisting operation shall be performed during hours of darkness or poor visibility unless the crane operator has a clear and unobstructed view of the load, boom tip and operational area or is directed by the signal person who has a clear view and communicates with the operator.

Where feasible, hydraulic cranes shall be parked so that no damage would occur if the boom were accidentally lowered.

Load weights shall be determined by one of the following methods:

- Certified scale (if available);
- A calibrated load weight indicator;
- Calculated weight (manufacturer-supplied weight); or
- Published standard weight tables.

Hoisting operations shall be suspended at outdoor temperatures specified by the manufacturer.

When operating in cold weather, the Lift Director shall verify that cold weather crane ratings are obtained from the manufacturer, posted, and made available when requested. These ratings shall be applied for lifting in cold weather conditions.

At least one anemometer should be attached to the crane boom tip when using crane booms over 150 ft. long on a project. Alternately, a project wind speed indicator positioned at greater than 100 ft. elevation must be available and accessible by the crane operator.

Load-monitoring devices shall be calibrated prior to starting work on a project, whenever the crane configuration changes, annually, or per manufacturer specifications-- whichever is more stringent.

Hydraulic and conventional boom cranes shall be equipped with "Anti-two-block" and/or warning devices and shall have all load lines that are in use protected by these devices.

A fire extinguisher is required on every crane.

An accurate method of measuring the crane radius must be provided.

Printed copies of the crane charts and operator's manual shall be kept in the crane.

Crane Inspection and Testing

Cranes shall be operated, inspected, and maintained per federal, state, and local requirements. For sample forms, please see the attached "[Mobile Crane Inspection Checklist](#)" and "[Tower Crane Inspection Checklist](#)."

Each crane that requires site assembly must receive a complete mechanical and structural inspection.

Cranes involved in incidents that result in shock loading of the boom or other components shall be removed from service and subjected to a complete inspection and recertification prior to resuming work.

Annual inspections must be done by a third party agency and a professional engineer must stamp the certificate of inspection. Mobile cranes used for short duration work with frequent access/egress from the project site will not be required to be certified every time it arrives to provide service. Note: This does not apply to conventional crawler or truck mounted lattice boom cranes requiring site assembly.

The operator shall complete and document a daily inspection.

Repairs

All repairs or modifications to cranes shall be:

- Performed per the manufacturer's specifications and inspected by a professional engineer; and
- Tested and certified to be not less than the original capacity.

Crane Flagging and/or Barricading

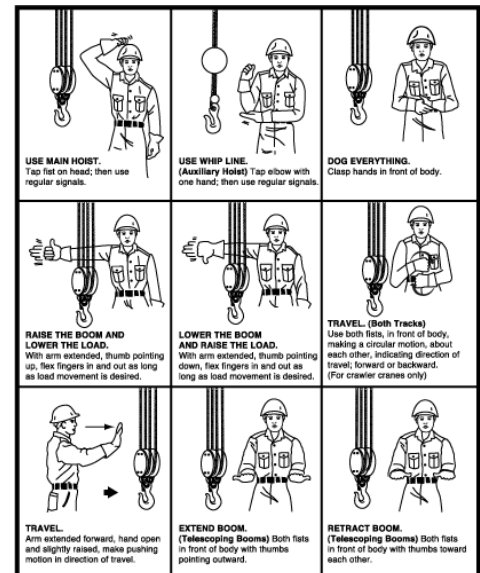
The swing radius of the crane's counter weight (tail swing) shall be barricaded. Only operators and oilers are permitted to enter this barricaded area.

If feasible, areas under/around lifts should be designated as exclusion/controlled access zones.

Requirements for Signal Persons

Signaling is an important part of the crane operation. Designated signal persons shall be used when:

- The operator cannot see the load;
- The operator cannot see the loads landing area;
- The operator cannot see the path of travel of the load or of the crane;
- The operator is too far away from the load to make judgment of distance difficult;
- The crane is working within a boom's length of the approach limits to power lines or electrical equipment;
- The client or jurisdictional authority requires it; and
- Loads are picked up at one point and lowered at another. Two signalers may be required – one to direct the lift and one to direct the descent.



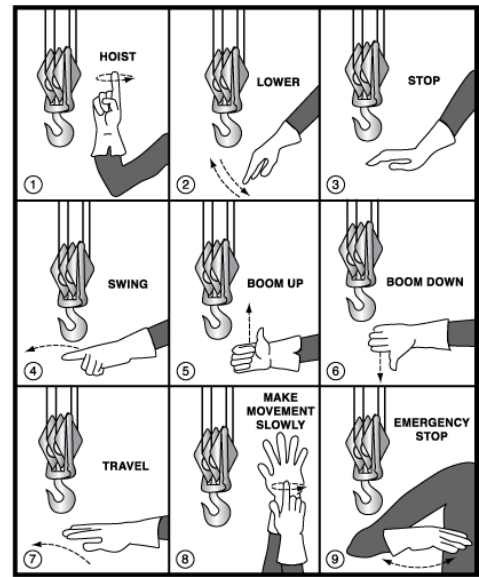
Hand signals should be used only when the operator has a clear view of the signaler. The international hand signals for hoisting shall be used.

In all other cases, radio communications between signaler(s) and operator shall be used.

The signal person shall be clearly identified to the crane operator that he is the signaler. Signal persons must be able to speak clear English.

Auditory signals:

- Must be communicated by radio.
- Must be determined during the pre-lift meeting.
- Radios must be tuned to a frequency that does not interfere with other radio users.
- Radios must be tested prior to the lift, and squelch adjustments made to attain the best possible reception.
- Auditory signals must be given continuously during the lift procedure or when the load is lowered into, or raised out of, the blind lifting area.



Blind Lifts

Hoisting where the crane operator does not have a continuously clear view of the load or hook is considered a blind lift. When the crane operator does not have clear line of sight to the signal person, then radios shall be used.

Communication between the signal person and the crane operator must be done by either visual (hand signals) or auditory means (radio communication).

The signal person must be positioned so load or hook is in clear view at all times while the hook, boom or load is moving. Signals must be given continuously during a lift or when the hook is being lowered into, or raised out of the blind lifting area.

CAUTION: If radio contact is lost, the crane must immediately stop until communication is restored. Preferably, back-up radios/batteries should be available when blind lifts are encountered. Even a 2 or 3 second loss or lack of communication can be critical. **If at any time the auditory signals cease to be communicated, the crane operator must cease all movement of the hook or load and wait for further instructions.**

When practical, all attachments such as slings, chains, spreader bars and other such equipment must be removed from the hook before being raised or lowered from the blind lift area.

Crane Travel

Crane travel around the project site shall follow manufacturer, federal, state, and local requirements and will be planned in accordance with the site logistics plan. The operator of a crane that is traveling with a load must verify that the load is secured and positioned as close to the ground or grade as possible.

The travel routes will have appropriate 10 ft. clearances from other vehicles and equipment, structures, high lines, etc.

Taglines

Tag lines should be used when required to control the load and to provide worker separation from the load.

Operators of cranes shall verify tag lines are used to control loads.

The operator and riggers shall verify that tag lines do not create a hazard such as becoming caught on equipment/material during hoisting of any load.

As a best practice, taglines will be preferably bright red or yellow, min 5/8" standard manila or nylon rope with ends burned to prevent fraying.

All tagline length shall be sized for purpose to verify that it will not get entangled during lifting and also allow sufficient length to control the load.

Outrigger Requirements

Where cranes are to be placed, the ground must be surveyed to determine stability. A geotechnical survey may be required to determine stability.

Cranes lifting beside excavations or adjacent to below grade structures shall be checked for ground and structure's stability prior to setting up the crane.

Where mobile cranes are to be placed on a structure, an analysis to determine the capacity of the structure to support the weight as well as shoring requirements must be undertaken. An analysis is required for all crane operations including when the crane is parked and in service as well as when the crane is in motion (travelling).

Where mobile cranes are situated adjacent to excavations or below grade structures, minimum clearance from the closest bearing edge of the crane to the excavation or structure should be maintained. If the project requirement calls for a mobile crane to be situated closer than outlined in the following sketches, a professional geotechnical engineer (and a professional structural engineer as required) should be consulted for guidance.

Tower Crane Requirements

Safe working loads must be clearly marked on the crane and must not be exceeded. After erection or climbing and before use, the crane must be inspected, overload tested in accordance with the manufacturer's instructions and stated sequence and witnessed by an independent engineer who, together with the Designated Person, must sign the crane log book. The crane shall be equipped with an anti-collision system, and must be subject to a functional test witnessed by the Designated Person before use. All tower cranes on Balfour Beatty projects are required to:

- have cameras installed to aid the driver
- provide anti-collision beacon
- have inclined access ladders, rest platforms every two vertical sections and double guardrails fitted at all open edges
- be under 10 years old or, if older, are subject to a non-destructive testing regime as agreed by the supplier and Balfour Beatty.

The Designated Person must obtain the necessary certificates (where appropriate) from the crane supplier before handover for operation. These should include:

- evidence of pre-delivery inspection (including non-destructive testing if appropriate)
- proof load test
- thorough examination
- anti-collision system certificate
- rope test certificate
- loose lifting tackle certificates
- crane operator induction (competency, medical, daily / weekly checks, emergency escape, etc)
- certification for emergency evacuation and rescue equipment
- operator manual in cab
- maintenance log book in cab
- information board (show crane type, model, maximum SWL, wind speed restrictions etc).

The crane operator must:

- carry out daily tests and inspections on the crane within accordance of the manufacturer's instructions and record the results in the crane log book
- carry out functional daily checks on any fitted anti-collision systems
- inform the crane supervisor immediately if there is a breakdown or fault.

The Designated Person must ensure the following are completed:

- daily crane foundation checks during the first week of operation

- weekly visual inspections
- weekly level checks for rail- / track-mounted tower cranes
- monthly checks for cranes mounted on reinforced concrete foundations
- examination of safety-critical items (e.g. bolts and welds) at least every three months or in accordance with manufacturers' instructions, whichever is the most frequent.

The Designated Person must ensure the planned maintenance program is completed and includes:

- pre-erection checking of the crane, including a program of non-destructive testing of mast bolts and other safety-critical items
- post-erection overload testing
- post-erection thorough examination by an Independent Competent Person in accordance with local regulations. The Competent Person must sign the crane log book and issue a certificate of statutory thorough examination
- 12-monthly ongoing thorough examination (or six-monthly if the crane is used to carry personnel)
- operator daily and weekly checks
- checks on fire fighting and emergency rescue equipment
- periodic maintenance, inspection and servicing in accordance with the crane manufacturer's maintenance manual.

The Designated Person must ensure that all applicable crane records are retained on the site. These generally include:

- post-erection test certificate
- four-year test certificate (if the crane is on site for an extended period)
- thorough examination certificate (initial plus 12-monthly or six-monthly if transporting personnel)
- rope certificates
- crane log book
- safety harnesses
- lifting tackle
- anemometers (hand-held)
- competency and medical certificates.
- communication equipment e.g. radios
- zoning and anti-collision certification
- over sailing licenses and 3rd party approvals
- details of any breakdowns or faults and the actions taken.

Override keys used with mechanical safe systems must be readily available and only used with the approval of the Designated Person and should only be used for maintenance, testing, commissioning and during emergencies.

Safety devices must not be tampered with or overridden.

Non-compliant or unserviceable plant and equipment must be immediately removed from use, tagged, isolated and remain unused until made serviceable or replaced.

All activities involving tower cranes must be planned and appropriately supervised.

Cranes must not be left in a part-erected condition overnight (i.e. jib partially folded back), unless allowed by the manufacturer.

Clearance must be allowed between cranes and structures to prevent trapping and to allow access for maintenance and erection / dismantle.

Tower cranes must be left in free slew when out of service (accounting for any property or infrastructure restrictions) to allow them to "weathervane" to ensure that the out-of-service foundation loads are not exceeded.

The Appointed Person must be aware of the wind speed action levels for the particular crane in use and must ensure the wind speed is monitored.

Tower cranes must only be used for vertical lifting of free loads and must not be used for tandem lifting, multiple lifting, demolition or piling duties.

Travelling tower cranes must not perform slewing and travelling motions simultaneously. If the crane is to travel, the jib must face the direction of travel and the load suspended as low and as close to the mast as possible.

In the event of any of the following, the crane must be stood down immediately and the incident reported in person or by telephone to the Balfour Beatty Lead Organization and to the crane supplier:

- loose or missing mast bolts or nuts
- parts fitted to the crane found not to be in accordance with the manufacturer's specification
- any repairs required to any parts of the crane structure
- cracks in the mast or jib sections including in the structure or welds
- dropped loads including where there is evidence of brake failure or operator error
- failure of load-bearing parts
- damage to internal tower ladders
- crane collisions (with buildings or cranes) or near misses
- failure of the anti-zoning and anti-collision system.

Dependent on local regulations, these may also need to be reported to specific regulatory authorities.

The crane can be returned to service only when the crane supplier has confirmed that it is safe to do so.

Where conditions change or planned controls are not met, the activity must be immediately stopped and reassessed.

Helicopter Lift Requirements

Subcontractors shall:

- Comply with all regulations and conditions set forth by Authority Having Jurisdiction (AHJ) applicable to the lift activities. This includes compliance responsibility for all subcontractors and service providers employed by the Subcontractor for the lift activities, including the Airlift Company.
- Communicate and coordinate with all affected trades and properties.
- Schedule and facilitate pre-lift meetings.
- Provide a written lift plan.
- Provide all required traffic controls necessary for the lift activities, including obtaining all required street/road closure permits.
- Provide all required security and pedestrian/public control necessary for the lift activities.

Basic Requirements for Helicopter Lifts

Prior to the start of any operation involving the use of a helicopter, a thorough survey of the conditions and hazards on the job site shall be made by BB and applicable contractors in conjunction with the pilot or pilot's representative to ensure a safe operation. This survey should be documented via the **Helicopter Lift Pre-Planning Checklist** in lieu of the typical Job/Activity Hazard Analysis.

A Code of Safe Practices shall be formulated and enforced for operations involving the use of a helicopter.

The Risk Assessment and Control Measures Review shall be addressed prior to starting work each day. This briefing shall include planning to minimize possible hazards of the day's operation and all personnel exposed shall be informed and directed as to safeguards and escape procedures.

If the helicopter pilot in command for any reason believes that a lift or operation cannot be performed safely, then that lift or operation shall not be attempted.

Helicopter operations shall not be performed beyond the helicopter's approved external load capacity or pilot's certification. The pilot's employer shall ascertain before operations begin that the pilot is properly certified by the F.A.A. and qualified to perform the planned operations.

The Subcontractor is to provide a written Helicopter Lift Plan to the BB Lift Coordinator not less than one week prior to the lift. Failure to provide this document as required may result in cancellation of the planned lift activities.

The Subcontractor and Airlift Company are each to provide a current Certificate of Insurance and Hold Harmless Agreement to the BB Lift Coordinator not less than one week prior to the planned lift activities. Failure to provide these documents as required may result in cancellation of the lift activities.

Cancellation of Planned Lift Activities

- BB may cancel planned lift activities or stop ongoing lift activities at any time if the Subcontractor fails to comply with the provisions of this procedure. Such action does not provide the Subcontractor with grounds for recourse or recovery.
- BB may cancel planned lift activities up to 24 hours prior to the scheduled arrival time of the helicopter for reasons relative to the safe operation of the Project Site. Such action does not provide the Subcontractor with grounds for recourse or recovery.

DEMOLITION

Subcontractors engaged in demolition must submit the following documentation to the BB Project Team:

- abatement programs,
 - air monitoring,
 - equipment operator certifications, etc.
 - fit testing, medical evaluations,
 - Job/Activity Hazard Analysis
1. Demolition activities shall be conducted under a survey and plan prepared by a Registered Professional Engineer.
 2. Subcontractors shall attain a permit issued by CalOSHA for the demolition of structures greater than 36'.
 3. At all times, demolition work shall be under the immediate supervision of the subcontractor's qualified person whom has the authority to ensure safety for anyone who may be potentially exposed to the activity. The qualified person must ensure that the demolition plan is in place, adequate, and followed by all personnel engaged in the activity.
 4. Workers engaged in demolition must wear adequate PPE such as cut-resistant forearm sleeves and gloves.
 5. Walls, which serve as retaining walls to support earth or adjoining structures, shall not be demolished until the hazard from moving ground has been eliminated by sloping, shoring or, where necessary, adjoining structures have been properly underpinned.
 6. Walls, which are to serve as retaining walls against which debris will be piled, shall not be so used unless determined to be capable of safely supporting the imposed load.
 7. During demolition, continuous inspections shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors or walls, or loosened material.
 8. Personnel shall not be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means.

9. All persons on demolition projects shall be protected from falling material at employee entrances to multi-story structures being demolished, by sidewalk sheds or canopies or both, providing protection extending from the face of the building for a minimum of 8 feet.
10. For a sample [Demolition Safety Checklist](#), please see the attachment.

DROPPED/FALLING OBJECTS

Protective measures must be in place to prevent drop hazards from falling and potentially causing harm where work is being conducted at heights. Drop hazards may consist of persons, tools, material, equipment, or other objects.

Pre-Planning

- Dropped/falling object protection must be addressed Pre-Task Plans, Job/Activity Hazard Analyses, and safety programs as applicable.

Edge Protection

- For guardrail systems where personnel may be present below, screening/paneling/mesh/netting must be in place from the walking/working surface to the top of the guardrail or higher.
- Elevator lobbies or shaft openings must be completely blocked-off, where feasible.
- When finished surfaces may not be damaged, guardrails may need to be installed, so that personnel will not need to lean into the opening to install/remove the guardrail.

Storage of Drop Hazards

- Trash and waste must be properly contained in buckets/pouches/containers that have the ability to be closed to prevent spillage.
- Work areas, tools, and materials must be maintained in an orderly fashion.
- Unless guardrails with screening or paneling have been erected, materials must not be stored within ten (10) feet of a leading edge.
- Stacked materials must be stable and self-supporting.
- Secure potential drop hazards to prevent them from being wind-blown.

Tethering/Securing of Drop Hazards

- Tools and materials must be tethered when working at height near the exterior/leading edge of a structure where screening will not prevent a drop hazard.
- Prior to selecting a tool lanyard, a proper attachment point must be established on the tool and the person/belt/harness. Attachment points must be manufactured for the purpose of tethering or certified as third-party tested for dynamic load by the manufacturer. Attachment points must be tested to an adequate load rating for the intended use of the tool.
- Tethers/lanyards shall be inspected prior to use. Excessively worn or damaged tools or materials must be immediately removed from service and replaced.
- Tools weighing more than five pounds may not be tethered directly to a person's body or wristband.
- For some tools and objects, a tool holster or tool pouch may be appropriate. Tools used in these holsters should weigh less than or equal to the manufacturer-stated load-rating for the holster/pouch.
- Wristbands used for tethering must be certified by the manufacturer as having been third-party tested for dynamic load.
- Positive tool transfer must be utilized. (When transferring a tethered tool from one person to another, "100% tie off" must be engaged. The tool must be tethered to the passing person. Prior to handing off, the receiving person must

connect their tether to the tool as well. After positive connection has been completed, the passing person may disconnect their tether from the tool.)

- For the safe transportation of tools and materials, buckets may be utilized only if they are manufactured with a closure system which allows the user to secure the contents of the bucket from potential spills and must be load rated by the manufacturer and third-party tested for static load.

Safety Nets

- In applications where safety nets are used, nets must be designed with specific sized webbing approved by the manufacturer for use based on the specific task, location and type of tools/materials being used.
- Forged steel safety hooks or shackles must be used to fasten the net to its supports. Nets should be installed as closely below the work in progress as is deemed practicable, but never more than 25 feet below (30' for Fed/OSHA projects). Safety nets shall be hung, maintained and tested in accordance with the manufacturer's instructions as well as the requirements set forth by the Occupational Safety and Health Administration found in CFR 1926.502.
- Nets designed for use to prevent falling objects shall not be used as fall protection for human beings (falling-object nets may be deployed below fall protection nets in these cases). When falling-object nets are used alone, signs must be posted informing persons that "Fall Protection is still required in work areas above placed netting."
- Inspections of safety netting must occur weekly and defective netting may not be deployed.

Overhead Protection

- Provide a perimeter system that restricts personnel from entering and exiting a structure except at entrances and exits with overhead protection.
- Overhead protection must be provided at all designated building access points, setbacks, and over or near any public interface (combined with appropriate controlled access zones).
- Overhead protection must be free of gaps.
- Protective canopies in a public right-of-way must be constructed in accordance with applicable local jurisdictions.
- The top of the canopy should consist of secured chain link fencing sandwiched between two sheets of ¾" plywood. Canopy tops must be tightly planked/covered to minimize any gaps.
- Canopy roofs must sustain a 300lb live load (in order to prevent dropped items from penetrating) when constructed near a building that is taller than 100 feet. For buildings shorter than 100 feet, the canopy top must be able to support a live load of 150 lbs.
- Canopies must be designed and have plans stamped by an engineer.

Controlled Access Zones (CAZs)

- CAZs and/or designated spotters must be in effect unless measures are in place to prevent drop hazards (i.e., screening, netting, etc.).
- CAZs must be clearly marked with barricades or danger tape to restrict access to unauthorized personnel. When a CAZ is no longer in effect, the barricades/tape must be taken down.
- CAZs must have signage posted that identifies who the CAZ belongs to, what the hazard is, and the person to contact for permission to access the area.
- CAZs must be of adequate size to effectively mitigate the risk from falling or ricocheting material.
- Persons authorized to work in CAZs (i.e., scaffold erection/dismantling, concrete deck forming, installation/removal of perimeter protection, etc.) must pay attention to what is going on above them and use spotters when needed.
- CAZs must be in place below hoisting activities.

ELECTRICITY & ELECTRICAL WORK

1. Ground Fault Circuit Interrupter (GFCI) protection is required for all 120v, 15 & 20 Amp receptacles, electrical extension cords and tools, including for those plugged into permanent power, portable generators and welding machines.

2. Electrical extension cords must be three-wire, 14 gauge minimum, rated for hard or extra hard usage, and rated for the tool/equipment's required amperage. If required by the manufacturer, electrical cords must not be plugged into one another.
3. Extension cords must be elevated and/or keep to the side of walkways to reduce exposure to damage. Cords are not to be routed through closed doorways/pinch points or in contact with metal or conductive objects/surfaces (unless protection is provided to avoid damage). Extension cords shall not be fastened with staples, hung from nails, or suspended by wire. Temporary power cords must be protected from damage. Those run overhead shall be adequately secured (with a non-conductive means) at or above 7 feet from floor level.
4. Only authorized personnel are allowed to enter electrical closets and power panels.
5. Work on energized equipment is strictly prohibited.
6. Electrical-panel covers must be in place on energized panels.
7. Damaged electrical equipment must be tagged and removed from the work area and be repaired by a qualified person.
8. Surge Strips are not allowed and Splitters must be rated for heavy usage, not home-receptacle type.
9. Work in wet or damp work locations must not be performed until all efforts to abate the hazard have been exhausted.

EXCAVATIONS

Subcontractors whose scope involves excavation/trenching work shall submit the following documentation prior to engaging in excavation activities:

- IIPP with Excavation Program
- Competent/Qualified Person certifications and proof of training
- JHA(s)
- Applicable permits (i.e., Cal/OSHA excavation permit)
- For excavations four (4) feet or more in depth, a detailed excavation plan showing the protective system to be used for the protection of personnel including, but not limited to the following: trench shield, shoring system, bracing, sloping, de-watering provisions, etc.

Subcontractors shall:

- Conduct site evaluation prior to starting work
- Attend a pre-dig meeting on site
- Understand and work in accordance with their Job/Activity Hazard Analysis
- Complete daily Pre-Task Plans
- Complete a [Daily Excavation Inspection Checklist & Log](#) (see attachment for sample form)
- Complete an [Excavation Utility Permit](#) (see attachment) as required by the BB Project Team

Inspection Requirements

The competent person responsible for the excavation(s) must be on site during all operations relating to the open excavation. Inspections shall be conducted by the competent person, documented, and a copy of the inspection provided to the BB Project Team—see attachment titled "[Daily Excavation Inspection Checklist & Log](#)."

The competent person shall classify the soil and shall inspect excavations:

- i. before entry:
- ii. at the start of each shift
- iii. as needed throughout the shift
- iv. after rain showers or heavy rains

- v. after freezing and/or thawing temperatures occur
- vi. after any condition that can cause change to the integrity of the soil
- vii. after nearby traffic, vibrations or earthquakes occur
- viii. after any significant modification to the support system

General Requirements

Excavations four feet or greater in depth;

- require protective systems (i.e., trench shield, shoring system, sloping, benching, etc.);
- must have a stairway, ladder, ramp or other safe and equivalent means of access and egress within twenty-five (25) feet of any employee working inside of the excavation; and
- where hazardous material may exist, the atmosphere in the excavation must be tested.

The Subcontractor shall obtain and maintain on site a Cal/OSHA Excavation Permit for excavations five (5) feet or greater in depth and shall in way of submittal, transmit copies of permits to BB Project Management & Supervision prior to the start of any excavation requiring a permit.

If the Subcontractor has an Annual Cal/OSHA Excavation Permit, the Subcontractor is required to fax a Job Notification to Cal/OSHA prior to the start of any digging or excavating. A copy of the Job Notification form shall be submitted to BB Project Management & Supervision before any digging or excavation work starts.

Where appropriate, barriers must be erected to prevent unauthorized access to an excavation.

All excavation material and stockpile material must be placed a minimum four (4) feet away from the edge of the excavation. Loose soil or rocks shall be removed from the side of the excavation walls and placed in a manner that the material does not have the potential to roll or become accidentally knocked back into the excavation.

For excavations over twenty (20) feet in depth or greater, all shoring, sloping, benching or any other protective means must be designed by a Registered Professional Engineer with means of verification.

The number of workers in the excavation shall be limited to the number needed to perform work.

Water shall not be allowed to accumulate in the excavation at any time. Pumps, drains or other means shall be used to remove water on a continuous basis or as needed.

Emergency rescue equipment shall be readily available.

While the excavation is open, the Subcontractor shall protect underground installations and utilities by supporting, or removing as necessary. When excavations must be left open for periods of time protective guardrails and/or hard barricades must be installed to prevent workers from falling into excavation.

Underground Utility Location and Potholing Procedures shall be followed to prevent damage to the identified underground utilities.

Subcontractors who will be working on preexisting sewage pipes must have their personnel; vaccinated from Hepatitis B or have signed waivers; trained on the applicable hazards including potential hepatitis B exposure; and must properly equip their personnel with protective equipment.

Equipment Operations

- Where lifting equipment is required to lift materials in / out of an excavation, consideration must be made of the ground conditions, anticipated loads, and surrounding structures e.g. overhead power lines.
- Where equipment e.g. a dump trucks are required close to an excavation, appropriate stop blocks must be used to prevent equipment from traveling into the excavation.
- Operations shall stop upon observation of any suspected unsafe soil conditions or if there are signs of previously disturbed soil, water seepage, or fissured soil.

- Vibration must be taken into consideration. Heavy equipment or nearby road traffic may also cause damage or disturb the excavation.
- No personnel shall be permitted underneath loads handled by lifting, excavating equipment, or dump trucks-- workers shall wait on top until load delivery is complete. Personnel are prohibited in areas where loads are being moved and/or placed.

Fall protection

- Where any personnel are exposed to fall hazards around trenches or excavations that are six feet or greater in depth, fall prevention measures must be addressed.
- Proper guardrails and toe boards shall be maintained at the top of the excavation when required for fall protection.
- Walkways with guardrails shall be used where personnel cross over excavations.

Trench Excavation Protective Systems

- Where buildings and other items are sufficiently close to risk surcharging of the excavation's sides, temporary support must be strengthened.
- Stability of adjacent structures shall be evaluated before starting an excavation and monitored daily thereafter.
- For excavations less than 20 ft. (6m) in depth, the maximum slope shall be 34 degrees measured from the horizontal (1-1/2 horizontal to 1 vertical) unless suitable protective systems are utilized.
- All support systems or shoring systems such as pre-engineered hydraulic systems shall have tabulated data on site and shall follow the guideline as stipulated within.
- Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function.
- Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.
- Removal of support systems shall begin at the bottom of the excavation and progress in an upward manner. Members shall be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.
- All excavations less than 20 ft. (6m) in depth which have vertically lowered portions shall be shielded or supported to a height at least 18 inches (.5m) above the top of the vertical side with a maximum allowable slope of 1-1/2:1.
- If a trench shield or trench box does not extend up to ground level, then the dirt above the top of the trench shield/box must be sloped. The slope must start at least 18 inches below the top of the box. When a trench box extends above the soil line, soil shall be placed on the sides to prevent workers from falling between the trench box and the excavation. End plates shall be used at both ends of the trench boxes as deemed necessary. THE TRENCH BOX/SHIELD MANUFACTURER'S TABULATED DATA SHALL BE FOLLOWED AND READILY AVAILABLE ON SITE.
- Protective systems in excavations over twenty (20) feet deep must be designed, stamped and signed by a registered professional engineer and be submitted to BB Project Management & Supervision. EXCEPTION: If the manufacturer of the shoring system (hydraulic shores, trench boxes, trench shields, slide rail systems, etc.) allows the use of its equipment to depths greater than 20 feet, the Manufacturer's Tabulated Data shall be submitted to BB Project Management & Supervision, and the Subcontractor competent person for trenching & excavation shall have a copy on the job site.

- Excavations of earth material to a level not greater than 2 feet (.61 m) below the bottom of a shield shall be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

Shield Systems

- Shield systems or trench boxes shall be used to protect employees from forces imposed such as possible cave-in.
- Shield systems shall not be subjected to loads exceeding those which the system was designed to withstand.
- Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.
- Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.
- Employees shall not be allowed in shields when shields are being installed, removed, or moved vertically.

Training

Supervisors must be adequately trained in safe excavation principles and assessed for competency. Competency consists of:

- number of years of experience in the relevant field
- qualifications
- training (Competent person training for Excavation, OSHA 30, First Aid, CPR)
- familiarity with appropriate techniques and equipment
- recognition of risks

Additionally, operators of equipment must have been trained on the specific piece(s) of equipment. Also, depending on the hazards to be encountered, other required training may consist of confined spaces, respiratory protection, hazmat, rigging & signal person, flagger, fall prevention, etc.

FORKLIFTS & TELE-HANDLERS

This section applies to all operations that require the use of powered industrial trucks which may include forklifts, tele-handlers, rough-terrain lifts, straight mast, motorized hand trucks, tractors, platform lift trucks, and other specialized industrial trucks powered by electric or internal-combustion engines.

1. Daily inspections shall be documented and include, at a minimum, the items listed on the attached [Heavy Equipment, Forklift, Tele-Handler Daily Inspection Checklist](#)—the checklist is an optional form that subcontractors may use if they don't have their own form. Any malfunction must be taken care of before the piece of equipment is put back into service.
2. Operators or their employer must provide a copy of their current certification. If they cannot produce one, they will not be allowed to operate the equipment until certification is attained.
3. Operators must pass the attached Forklift Quiz prior to operating on a BB project. Only trained and authorized operators are allowed to operate forklifts. [Tele-Handler Forklift Evaluation English](#). [Tele-Handler Forklift Evaluation Spanish](#)
4. A PTP must be completed each day that includes a listing of the weights of material to be moved and where in the load charts the weights fall.
5. "Free Rigging", the practice of hoisting equipment/material from forks, is not allowed-- Only manufacturer-approved attachments such as "truss-boom" attachments that have a load chart are permitted.
6. Chains, slings, and rigging used for hoisting must be inspected, tagged, and properly rated for the capacity to be lifted.
7. Forklifts must be equipped with approved overhead protection at all times in addition to roll-over protection (ROPS).
8. Telescoping boom forklifts must be equipped with a convex rear view mirror on the blind side of the machine.
9. Operators manual must be available for review by operators and supervisory personnel.

10. Capacities must be marked on the lift so it is clearly visible to someone in the operator's seat.
11. No use of propane-powered forklifts indoors or in confined spaces without adequate ventilation and air monitoring. The operation of fuel-powered industrial trucks indoors or in enclosed areas must be done with adequate ventilation and air monitoring for poisonous gases such as Carbon Monoxide (CO).
12. All equipment with a field of vision less than 270 degrees (i.e. rough terrain/all-terrain forklifts) will have a proximity alarm (this is different than the back-up alarm requirement). This alarm will have an audio and visual component. Proximity alarms will be installed in a position to best mitigate blind spots.
13. Controlled Access Zones must be set up around overhead/lifting activities.
14. Spotters must be used when traveling through congested areas, around blind spots, and at any time when the operator's vision may be hindered.
15. Operators must follow these rules:
 - Stop at all intersections.
 - Yield to pedestrians.
 - Face the direction of travel.
 - Reduce speeds when turning.
 - Sound your horn at blind corners.
 - Keep a safe distance behind other trucks, do not drive side-by-side.
 - Stop completely before backing up.
 - Never park closer than 8 feet from the center of railroad tracks.
 - Cross rail road tracks diagonally.
 - When parking, place the forks on the ground and tilted forward. Set the parking brake and remove the key.
 - When carrying a large of bulky load that obstructs visibility, the forklift is to be operated in reverse. Look where you are going.
 - Do not lift unstable loads.
 - Do not add counter weights to the forklift.
 - Follow the manufacturer's instructions when driving up and down ramps. Keep the load uphill.
 - Never turn while still on a ramp.
 - No riders are allowed.
 - Never allow anyone to walk or stand under the uprights or a load.
 - Note low clearance hazards such as pipes, sprinkler heads, doorways, etc.
 - Do not push or carry another disabled forklift with your forklift.
 - Be aware of carbon monoxide hazards and if in an enclosed area subject to accumulation of carbon monoxide get an air monitor and test the air continuously.
 - Before entering a truck trailer or railroad car, make sure its brakes are set and wheels chocked.
 - Trailers not coupled to a tractor must have, in addition to its landing gear, fixed jacks.
 - Always use a proper dock board with feet and handles. Steel plates can shift and are dangerous.
 - Avoid parking on an incline if possible. If necessary, wheels must be chocked.
 - If a forklift is to be used to elevate a work platform, use an approved safety platform with top rail, midrail, toe board, and attach platform properly with the moving parts of the mast protected. All other provisions as defined in the OSHA standards must also be followed.
 - Forklifts shall be equipped with back up alarms, and if operating on roads, a yellow warning light and slow moving vehicle sign.
 - A 10 lb. ABC fire extinguisher must always be within reach of the operator.
 - If the powered industrial truck is unattended, the operator shall not exceed a distance of 25' away and the load must be lowered, controls in neutral, brakes set, and power shut off.

- Seat Belts must be worn at all times while in the operator's seat. Personnel working in the vicinity of powered industrial trucks must wear reflective vests.

HEAVY EQUIPMENT

1. Pre-Task Plans and Job/Activity Hazard Analyses must identify heavy equipment to be used, associated hazards, and controls. Equipment operators must address the presence of personnel on foot in the areas of their operations. Likewise, personnel on foot in areas with moving equipment must address the equipment hazard in their planning.
2. Personnel should not be within ten feet of moving vehicles without adequate protective measures such as hard barriers (k rails, jersey barriers, etc).
3. Personnel shall not alter any equipment or systems without prior approval from the equipment/tool manufacturer and BB Project Management/Supervision.
4. Cell phone use is not allowed while operating equipment.
5. A valid driver's license is required for operating any vehicle or heavy machinery on the job site or corresponding right-of-way.
6. The speed limit on site, including parking lots, is 10 M.P.H. unless otherwise posted.
7. Engines must not be allowed to idle on BB Projects. Vehicle engines shall not be allowed to run in closed garages or other enclosed places, unless vents are provided which effectively remove the exhaust gases from the building.
8. Combustible and flammable materials shall be removed from the immediate area prior to operations.
9. Equipment shall be equipped with a fire extinguisher having a 5 BC rating or higher.
10. Whenever the equipment is parked, the parking brake shall be set. Equipment parked on inclines must have the wheels chocked and the parking brake set.
11. Equipment must have sufficient drip tubs to prevent leaks from contacting the soil. Leaks must be corrected IMMEDIATELY upon observation.
12. If equipment will be leaving the site, track out must be prevented by adequate means.
13. Where vehicles are operated, temporary covers for conduits, trenches and manholes and their supports, when located in roadways and vehicular aisles, shall be designed to carry at least 2 times the maximum intended vehicular live load and they shall be designed and installed as to prevent accidental displacement.
14. No equipment having an obstructed view to the rear will be allowed unless:
 - The vehicle has a reverse signal alarm audible above the surrounding noise level.
 - The vehicle is backed up only when a flagger, signal person, or spotter signals that it is safe to do so.
 - The vehicle is equipped with a back-up camera.
 - The operator follows a hands-off-the-controls/levers method when personnel are on foot in the area if feasible.
15. Tools and material shall be secured to prevent movement when transported in the same compartment with employees.
16. When mounting or dismounting a piece of equipment, personnel must maintain three points of contact and face the equipment. Non-slip surfaces should be in place on equipment.
17. Where a hazard exists to personnel because of traffic or haulage conditions at work sites that encroach upon public streets or highways, a system of traffic controls in conformance with the latest edition of "Manual on Uniform Traffic Control Devices for Streets and Highways" shall be required so as to abate the hazard. Additional means of traffic control, such as continuous patrol, detours, hard barricades, or other techniques for the safety of employees may be employed.
18. Slow-moving vehicles (less than 25 mph) driven on public roadways shall be clearly identified by posting a triangular emblem, colored fluorescent yellow-orange with dark red reflective border.
19. Equipment that must pass under overhead utilities must be fully lowered.

Roll-Over Protective Structures (ROPS) and Cab Protection

1. ROPS and seat belts shall be installed and used on all equipment that was provided with a ROPS by the manufacturer. ROPS shall provide operator protection against the hazard of falling objects. ROPS system manufacturer's labels must be intact and legible.
2. All cab glass shall be safety glass, or equivalent, that introduces no visible distortion affecting the safe operation.
3. All vehicles with cabs shall be equipped with windshields and powered wipers. Cracked and broken glass shall be replaced. Vehicles operating in areas or under conditions that cause fogging or frosting of the windshields shall be equipped with operable defogging or defrosting devices.
4. All haulage vehicles, whose pay load is loaded by means of cranes, power shovels, loaders, or similar equipment, shall have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials.

Required Components

1. All vehicles shall have a service brake system, an emergency brake system, and a parking brake system. These systems may use common components, and shall be maintained in operable condition.
2. Whenever visibility conditions warrant additional light, all vehicles, or combinations of vehicles, in use shall be equipped with at least two headlights and two taillights in operable condition.
3. All vehicles, or combination of vehicles, shall have brake lights in operable condition regardless of light conditions.
4. Proximity Alarms – As a best practice, all equipment with a field of vision less than 270 degrees (i.e. rough-terrain/all-terrain tele-handlers) should be equipped with an operational proximity alarm (this is different than the back-up alarm requirement). This alarm will have an audio and visual component. Proximity alarms will be installed in a position to best mitigate the blind spot hazard.
5. Quick Hitch Releases – All equipment having quick hitch release mechanisms to change buckets or features on the equipment will be thoroughly reviewed and operators must provide evidence of training and knowledge, of their use and verify safety devices are engaged and fully locked.
6. All vehicles must be equipped with an operable audible warning device (horn) at the operator's station.
7. The wearing of seatbelts is mandatory on all equipment at all times. Riding in the beds of trucks, trailers or in/on any vehicle that does not provide safe seating for passengers is prohibited. Seat belts and anchorages meeting the requirements of 49 CFR Part 571 (Department of Transportation, Federal Motor Vehicle Safety Standards) shall be installed in all motor vehicles.
8. Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried.

Inspection Requirements

1. All heavy equipment shall have a documented inspection at the beginning of each shift to ensure that the equipment is within safe operating conditions as required by the manufacturer and free of apparent damage that could cause failure while in use. All defects shall be corrected before the vehicle is placed in service. For a sample inspection form that may be used, see the Equipment Inspection Checklist.
2. Mobile equipment without the proper safety devices shall be reported to the person in charge of equipment maintenance for correction.

Maintenance

1. Maintenance of heavy equipment must be in accordance with manufacturer and other applicable requirements. Only qualified personnel are allowed to maintain equipment and must abide by the BB Project's requirements and have provisions for lone working. Maintenance personnel must have and follow written Lock Out Tag Out procedures (or block out procedures). Waste materials and liquids must be properly disposed of.
2. Except for emergency field repairs, a safety tire rack, cage, or equivalent protection shall be used when inflating truck or equipment tires after mounting on a rim, if such tires depend upon a locking ring or similar device to hold them on the rim.

Flaggers

1. A flagger or flaggers shall be utilized at locations on a construction site where barricades and warning signs cannot control the moving traffic. Flaggers shall be utilized in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways published by the State Department of Transportation.
2. Flaggers shall be trained by persons with the qualifications and experience necessary to effectively instruct the employee in the proper fundamentals of flagging moving traffic. [Online training](#) resources are available for flagger certification. Certification of flaggers is available for look up by anyone and is [stored online here](#).
3. Flaggers must be certified and shall wear warning garments such as vests, jackets, or shirts manufactured in accordance with the requirements of the American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) 107-2004, High Visibility Safety Apparel and Headwear. During the hours of darkness, flaggers' stations shall be illuminated such that the flagger will be clearly visible to approaching traffic and flaggers shall be outfitted with reflectorized garments manufactured in accordance with the requirements of the American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) 107-2004, High Visibility Safety Apparel and Headwear. The retroreflective material shall be visible at a minimum distance of 1,000 feet. White outer garments with retroreflective material that meets the above requirements may be worn during hours of darkness but not during snow or fog conditions, in lieu of colored vests, jackets and/or shirts.

HAZARDOUS MATERIAL

1. All known or suspected hazardous substances in the workplace will be properly labeled, including secondary containers.
2. Necessary, appropriate, protective equipment and devices shall be furnished by subcontractors for their personnel working with or exposed to hazardous substances.
3. Material usage and disposal shall be accomplished with strict adherence to applicable State and Federal Regulations and to manufacturers' warnings on the Safety Data Sheets (SDS) and product container labels.
4. The Subcontractor performing the removal of hazardous materials, shall be solely responsible for providing qualified and trained personnel to remove, store and transport the hazardous materials.
5. The Subcontractor shall refer to the definitions included in Sub-parts Z of 29 CFR 1926, for hazardous and toxic materials/substances and to others as additionally defined in Federal Standard 313A. Those most commonly encountered hazardous and toxic materials/substances include asbestos, polychlorinated biphenyl (PCB), Chromium VI, and lead-based paint or material, but may include others. The products most likely to contain asbestos are sprayed-on fireproofing, insulation, boiler lagging and pipe covering, pipe, flooring materials, and lamp gaskets. Products likely to contain PCB are transformers, capacitors, voltage regulators and oil switches.
6. Where Asbestos Containing Building Materials (ACBM) lead paint or mold are abated, the Subcontractor, Subcontractors Tiers, Supplier, Vendor shall provide the Project Manager with clearance certificates, signed by a Certified Asbestos / Mold / Lead Consultant, once asbestos / lead / mold abatement has been completed.
7. The Subcontractor shall bring to the attention of the BB Project Manager and BB Safety Manager any material suspected of being hazardous encountered during execution of work. A determination will be made by the BB Project Manager as to whether the Subcontractor shall perform tests to determine if the material is hazardous and/or what measures will be taken to confirm that the material is hazardous and what abatement measures will be undertaken and by whom.
8. The Subcontractor shall provide the proper copies of the proper paperwork, shipping and disposal manifests to prove the hazardous materials were abated, stored, transported and disposed of in accordance with current local, state and federal requirements.
9. Empty aerosol spray cans shall be disposed of in proper containers identified by the BB Project Manager or Superintendent.

10. Paints and solvents shall be washed from tools in an approved washout location. Washout to be provided and maintained by Subcontractor.

HEAT ILLNESS PREVENTION

Subcontractors shall comply with [California's Heat Illness Prevention Standard](#). California subcontractors are required to take these four steps to prevent heat illness:

1. Training: Train all employees and supervisors about heat illness prevention.
2. Water: Provide enough fresh water so that each employee can drink at least 1 quart per hour, *and encourage them to do so.*
3. Shade: Provide access to shade and encourage employees to take a cool-down rest in the shade for at least 5 minutes. *They should not wait until they feel sick to cool down.*
4. Planning: Develop and implement written procedures for complying with the Cal/OSHA Heat Illness Prevention Standard.

In addition to California's HIP requirements, subcontractors shall provide the BB project team with their company's Heat Illness Prevention Program/written procedures (HIPP) not less than two weeks prior to their start of work on a project. Also, each subcontractor must provide proof of personnel training on their HIPP. Proof of training may consist of the following:

- a list of trained workers on subcontractor's letterhead,
- a class roster with the company name, or
- employee training cards.

Lastly, subcontractors must identify heat related exposures on their JHA(s) and PTP(s) to ensure control measures are in place and enforced. Subcontractor workers will be responsible for following the requirements set forth in their company's HIPP as well as following control measures identified on their JHAs and PTPs.

HOT WORK

1. Hot Work includes any work involving burning, welding, or similar operations that is capable of initiating fires or explosions.
2. Subcontractors who perform hot work activities must have a Hot Work Program that is either equal to or greater than BB's Hot Work Program.
3. Only authorized and trained individuals shall be permitted to perform hot work operations.
4. Hot Work shall be permitted only after all precautionary steps have been completed as indicated on the Hot Work Permit. See the attached "[Hot Work Permit](#)."
5. At least one fully charged and operable fire extinguisher that is appropriate for the type of possible fire must be immediately available at the hot work location. Balfour Beatty ensures that general duty fire extinguishers are provided and maintained per OSHA Standards, however, subcontractors must provide their own activity-appropriate type and size fire extinguisher protection as applicable.
6. Fire watch personnel must be trained in the use of fire extinguishing equipment and be familiar with the Project Specific Fire Prevention Plan. Personnel performing hot work activities must have adequate training and experience to perform their duties safely. Personnel operating arc welding equipment and gas-shielded welding equipment must be competent. Personnel handling fuel gas must be instructed on safe practices.

7. A Fire Watch shall be maintained in the area of the hot work operations during hot work operations and for at least 30 minutes after the hot work has ceased. NOTE: Some projects may require a Fire Watch to remain in place for a longer period of time. BB's Project Manager or Superintendent will identify the areas/projects where the Fire Watch has to remain on station longer than 30 minutes.
8. All combustible materials shall be removed from the vicinity of any spark producing or open flame activity. Dumpsters must be located twenty (20) feet or more from buildings except when located beneath a trash chute.
9. No welding, cutting or spark producing activity shall take place within fifty (50) feet of flammable fuel storage or fueling operations, or within (25) feet of combustible materials.
10. Personnel engaged in hot work activities shall cover all wood planking, scaffolds, wooden forms, and flammable and/or combustible materials or liquids that are within 35 feet of the work area that cannot be removed, with approved fire-retardant blankets, pads, curtains, covers and/or shields.
11. Combustible floors are protected with approved fire-retardant blankets, pads, curtains, covers and/or shields.
12. Special precautions should be taken for heating pipes or other metal that is in contact with combustibles, walls, partitions, ceilings, or roofs.
13. When hot work is performed at an elevated location, sparks or slag that could fall and land under the hot work operation shall be adequately protected against.
14. Adequate ventilation is required for all hot work operations.
15. The floor shall swept clean within 35ft. of the work area.
16. The Subcontractor shall erect flash screens or suitable fire resistant barriers where there is the possibility of exposing personnel or the general public to radiation emitting from arc welding or similar operations.
17. Cylinders containing oxygen or oxidizing gases shall be separated from cylinders in storage containing fuel gases by at least 20 ft. or by a fire resistive partition having at least a ½ hour rating that is at least five feet high or 1 foot higher than the cylinders, whichever is taller. Note: According to EM385-1-1, 20.D.03d storage of fuel gases must maintain by at least 20 feet or by a fire restive partition having at least a 1 hour rating.
18. All compressed gas cylinders in service shall be secured upright in substantial fixed or portable racks or hand trucks.
19. Compressed gas cylinders shall be secured in an upright position at all times, except when being hoisted (except acetylene cylinders shall never be laid horizontal).
20. If propane cylinders are to be used on this project proper storage must be provided by the Subcontractor. This storage must be secured and kept a minimum of 50 feet away from any building or structures. This storage must be protection from vehicular/equipment traffic and no smoking within 50 feet signs shall be posted.
21. Sprinkler heads and/or sensors must be protected if hot work is done in close proximity to an automatic fire detection or suppression system. Systems may need to be placed in test mode during hot work activities.
22. Hot work is not allowed in the following areas:
 - In areas not authorized by BB Management
 - In the presence of explosive atmospheres (e.g. gases, vapors, liquids, or dusts)
 - In areas where explosive atmospheres could potentially develop
 - In areas with an accumulation of combustible dusts
23. Hot Work Permits (HWP) shall be completed:
 - For welding, cutting, grinding, and other hot-work activities.
 - Prior to hot work activities commencing.

- For up to one work shift with the exception of exterior construction such as steel erection or reinforcing steel which may be completed for up to one week.

24. HWP Process

- i. Personnel who are to engage in hot work obtain a permit from BB
- ii. Personnel completes permit section 1
- iii. Personnel gives completed permit to BB Supervisor
- iv. BB Supervisor verifies adequacy of the permit
- v. BB Supervisor and personnel sign Part 1
- vi. BB Supervisor retains Part 1
- vii. Personnel takes Part 1A and retains it for records
- viii. Personnel fills out and displays permit at the location of the hot work
- ix. After fire watch is complete, personnel sign bottom of Part 2
- x. Personnel returns Part 2 to BB Supervisor.
- XI. BB Supervisor to retain HWP until conclusion of the project/activity

HOUSEKEEPING

1. All work areas shall be maintained in a “broom swept” condition utilizing a non-dust producing compound at all times to the greatest possible extent. This shall include packing materials, demolition debris, and scrap material, unused or unusable excavated material. If the Subcontractor fails to comply, the Project Manager or designee will remedy the non-conforming situation and deduct costs incurred from monies owed the Subcontractor.
2. Debris will not be allowed to accumulate. All trash shall be removed and cleaned up from the site or contained in suitable covered dumpsters, trash bins or similar containers.
3. Loose materials shall not be stored around the floor perimeter edge or perimeter of floor openings where they can be easily knocked off. All materials shall be maintained in neat stockpiles for ease of access. Keep aisles and walkways clear of loose materials and tools. Materials shall not be placed within six feet of any hoist way or floor openings or within ten feet of any exterior wall that does not extend above the material stored.
4. Clean up loose materials, waste, etc., immediately. This is especially important in aisles and in the vicinity of ladders, ramps, stairs, and machinery. Tools and loose materials should be removed immediately if a hazard is created. Protruding nails should be removed or bent over as the material is removed. Cleaned lumber should be stacked in orderly piles. Workmen performing this task should wear heavy gloves and puncture-proof insoles.
5. Empty bottles, containers and papers should not be allowed to accumulate where lunches are eaten on the jobsite. Trash disposal cans shall be provided. Glass bottles are not allowed on the construction site.
6. Any debris that is dropped more than 20 feet to any point outside the exterior walls of the structure shall be done with the use of a chute or slide. The chute or slide must be enclosed on all sides. Employees and general public shall be protected by flying debris by barricade or other protective means as necessary. A lockout/tagout program, fall protection or other requirements for the removal of clogged material may be required. Before removal of clogged material, a competent person shall review the operation and applicable JHA.
7. Spilled liquids shall be cleaned up immediately.
8. Sanitation will be in accordance with OSHA Subpart D 1926.51 (Sanitation). This references drinking water, toilet facilities, and hand washing stations.
9. All stairways, passageways, gangways, and crossways, must be kept free of material, supplies, and obstructions at all times.

10. Containers shall be provided for the collection and separation of waste, trash, oily and used rags, and other refuse. Containers used for oily, flammable, or hazardous wastes, such as caustics, acids, harmful dusts, etc., shall be equipped with labels and covers.
11. All trash and debris will be removed from all work areas daily. Trash receptacles shall be emptied as needed. All trash/debris must be cleaned up and disposed in the appropriate dumpsters and covered nightly. This includes lunch/break trash. Work areas must be cleaned every day by trades that generate the debris and maintained in a safe working condition. Housekeeping is a condition of employment
12. Sweeping compound shall be used when sweeping is conducted.
13. Any alterations/renovations in finished areas shall require adequate dust control methods such as temporary dust protection or tools/vacuums with HEPA filters to collect dust generated.
14. Dry sweeping and the use of compressed air for the cleaning of floors and other surfaces shall be prohibited. If vacuuming is used, the exhaust air shall be HEPA filtered to prevent generation of airborne respirable dust. Gentle wash down of surfaces is preferred.
15. Strict compliance with the project specific Construction Waste Management Plan is required. Recycled materials include but are not limited to wood, scrap metal, concrete, asphalt, cardboard, and drywall. Construction waste shall only be placed in the appropriately labeled dumpster.
16. Extension cords, hoses, welding leads, etc., must be run overhead when possible in stairways, aisles, and exit areas.
17. NO Tobacco or sunflower seeds are allowed on jobsites, (except in designated areas).
18. No eating in buildings (except BB designated lunch areas identified by the site logistics plan).
19. The floor of every workroom shall be kept as dry as possible. Drainage shall be maintained where wet processes are used, and false floors, platforms, mats, or other dry standing places shall be provided, when possible.

LADDERS

- Ladders should be considered as a last resort to gain access to work areas and/or work positions. Subcontractors shall eliminate the use of ladders as much as feasible by supporting the use of alternate methods for reaching work areas at various heights. For example, in lieu of ladders, a subcontractor may choose to use mechanical and mobile lifts such as elevated work platforms with guardrails. However, in various situations where ladders need to be used, Subcontractors shall ensure that safe ladder practices are followed.

Ladder users shall be trained on the following:

- Importance of using ladders safely including injuries due to falls from ladders.
- Selection of ladders, including types, proper length, maximum working loads, and electrical hazards.
- Maintenance, inspection, and removal of damaged ladders from service.
- Erecting ladders including footing support, top support, securing, and angle of inclination.
- Climbing and working on ladders including user's position and points of contact with the ladder.
- Causes of falls, including haste, sudden movement, lack of attention, footwear, and user's physical condition.
- Prohibited uses including climbing on cross bracing, uses other than designed, exceeding maximum lengths, and not meeting minimum overlap requirements.
- All manufacturer requirements and instructions

Safe Ladder Practices - General

- Only the following ladder types shall be used:
 - Type 1 (250 lbs maximum rated capacity),
 - Type 1A (300 lbs maximum rated capacity),
 - Type 1AA (375 lbs maximum rated capacity)

- Ladders must not be loaded beyond the manufacturer's rated capacity
- Ladders constructed primarily of metal shall not be used
- Manufactured-wood or trestle ladders shall not be used
- Ladders shall be used according to their intended design
- Specialty ladders shall only be used with BB approval
- Fall protection is required when the worker is at a standing height greater than six feet (6') above the adjacent surface. A retractable device is recommended for connecting to an anchor point for ladder use.
- A fall protection system shall be used when a worker is exposed to other potential fall hazards such as leading edges, open floor/wall holes or window openings while working and/or ascending or descending from a ladder.
- Access Ladders - A fall protection system is required for access ladders (including scaffold access ladders) where the top landing is greater than twenty feet (20') above the adjacent surface (within a 6' radius). **Scaffold stairs towers shall be used to access elevated work areas when it is the primary access to an area.**
- Only ladder rungs, not the side rails, shall be used while ascending or descending ladders
- Users shall keep their body in between the side rails of a ladder and not overreach
- Do not carry equipment or materials while ascending or descending ladders
- Users must face ladders and maintain 3 points of contact at all times while working and/or ascending or descending from a ladder
- Ladders must be equipped with non-skid safety feet
- Ladders shall be placed on a stable and level footing at all times
- Ladders shall not be used on ice, snow or slippery surfaces
- Do not place ladders in passageways, doorways, driveways, or any location where they may be displaced by other work activities, unless protected by barricades or someone dedicated to watch and warn both the user and others that might approach the work area
- Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height
- Ladder feet shall not be wrapped with plastic or carpeting
- At the base of a ladder, the landing surface must be clear and smooth (for example, when ladders are used to access rebar mats in an excavation, a piece of secured plywood would be an adequate landing).
- Avoid excessive pulling and pushing while on a ladder.
- Job-built ladders should only be built by qualified carpenters and according to OSHA and ANSI standards.
- Get help when moving large/heavy ladders.
- Never store material or tools on the steps of a ladder.
- Employees shall be trained on ladder use/safety as part of their employer's safety program.

Inspection / Maintenance

- Inspect ladders prior to use. Never use ladders with broken, bent or missing rungs or steps, broken or split side rails, missing labels, or other faulty or defective construction. Ensure movable parts operate freely without binding or undue play.
- Damaged ladders shall be tagged as defective and removed from service.
- Ensure the side rails, cleats, and/or rungs of ladders are kept clear and free of lines, hoses, cables, wires, oil, mud, ice, grease, and debris.
- Ensure areas around the top and bottom of ladders are kept clear of materials, tools, equipment and debris.

Safe Ladder Practices - Extension Ladders

- Extension ladders shall be setup at a 1:4 base to height ratio
- Side rails must extend at least 3 ft. above the upper landing
- Tie, block, or otherwise secure ladders to prevent them from being displaced or moved
- Extension ladders shall only be adjusted while standing at the base
- Workers shall not stand on the top three rungs of an extension ladder
- Extension ladders shall only be used with the rung locks engaged
- Always be aware of overhead hazards when setting up an extension ladder
- For heavier ladders, two people are required to erect and move the ladder
- A step-through system should be used when possible at the top of ladder landings

Safe Ladder Practices - Stepladders

- Always fully open and lock side braces when using stepladders

- Stepladders shall not be used for access and egress to elevated work areas
- Step ladders shall not be used as a straight ladder or in the partially closed position
- Do not place planks on the top or on any step of a stepladder
- Never stand on the top two steps or top cap of a stepladder
- Never climb on the rear side of a one-sided stepladder
- Never straddle a stepladder
- Place all four feet of the ladder on even and solid footing
- Do not “walk” ladders.

Safe Ladder Practices - Job-Built Ladders

- Job-built ladders must be constructed in accordance with ANSI Standard A14.4 1979
- Job-built ladders must be constructed for intended use and must safely support the intended load.
- If a ladder is to provide the only means of access or exit from a working area for 25 or more employees, or simultaneous two-way traffic is expected, a double-cleated ladder shall be installed.
- Double-cleated ladders must not exceed 24 ft. in length
- Single-cleat ladders must not exceed 30 ft. in length
- The width of single-cleat ladders shall be at least 15 inches, but not more than 20 inches, between rails at the top.
- Rail splicing is permitted only when there is no loss of strength to the rail
- Rails must be made from select Douglas fir without knots
- 2x4 inch lumber shall be used for side rails of single cleat ladders up to 16 feet long; 2x6 inch lumber shall be used for single-cleat ladders from 16 to 30 feet in length.
- 2x4 inch lumber will be used for side and middle rails of double-cleat ladders up to 12 feet in length; 2x6 inch lumber for double-cleat ladders from 12 to 24 feet in length.
- Inset cleats into the edges of the side rails ½ inch, or filler blocks shall be used on the rails between the cleats. Secure the cleats to each rail with three 10d common wire nails or other fasteners of equivalent strength. Uniformly space cleats at 12 inches top-to-top.

LOCK OUT TAG OUT (LOTO)

It is the policy of BB to strictly **prohibit work on energized circuits and equipment**. The requirement for lock-out tag-out (LOTO) applies to all sources of hazardous energy including electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Subcontractors and their tier-subcontractors who perform authorized hazardous energy work are responsible for their LOTO activities and must provide the BB Project Team with their LOTO program, applicable procedures, and proof of training. Specific LOTO procedures* for the task(s) to be conducted on the BB project must be included on or with the Subcontractors’ and their tier-subcontractors’ respective job hazard analysis and will be reviewed by the BB project team. All major equipment, i.e. hoists, backup generators, air compressors, etc., must have a specific written procedure for LOTO and energy isolation.

All LOTO must be coordinated with the BB SH&E Manager, Superintendent and/or Sr. Project Manager. No equipment shall be taken out of service without notification to the BB SH&E Manager, Superintendent and/or Project Manager. It is the Subcontractor and their tier-subcontractors responsibility to supply their own LOTO devices (e.g., tags, locks and point of contact--name and telephone number). Additionally, static/grounding cables must be used to prevent static spark anytime equipment is cut out or unbolted and removed where a hazardous atmosphere may be present.

*LOTO procedures shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this standard. The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance including, but not limited to, the following:

- Specific statement of the intended use of the procedure

- Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy
- Specific procedural steps for the placement of lock out or tag out devices and the responsibility; and
- Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

Placement of Locks

A member of the BB Project Management Team and the property owner or their representative(s) must be notified and have given approval to shut down and lock out the system or equipment before attaching the locks to the isolating devices.

It is the responsibility of each person working within the "LOCK-OUT" area to place his/her own lock or tag on upstream lockout points. Use of another person's lock or tag (i.e. working in the area under the security of another person's lock) is STRICTLY FORBIDDEN. During construction and prior to check out of the system, the supervisor in charge of the installation of equipment may attach a single lockout device as a means of control, but employees are still required to lock and or tag to assure their own safety.

If a job extends over a change in shifts, the person coming on the job shall put his/her lock on all the lock-out points and the person leaving shall remove his/her locks.

When more than one employee may be exposed to the hazard of re-energizing a de-energized circuit, each exposed employee must apply their own lock. A lock-out scissors, cable or other such multiple lock devices shall be used.

A stop button or electrical interlock must never be used as a substitute for "LOCKOUT".

All persons having the need to enter a locked out area or system will be issued as many locks as necessary to perform the expected tasks of the job. "LOCKOUT" locks will be identified with the individuals' number and name. One key will be issued with each lock. Any remaining keys will be forwarded to the project office.

If a job extends over a change in shifts, the person coming on the job shall put his/her lock on all the lock-out points and the person leaving shall remove his/her locks.

Use of another person's lock (i.e. working in the area under the security of another person's lock) is STRICTLY FORBIDDEN.

When more than one employee may be exposed to the hazard of re-energizing a de-energized circuit, each exposed employee must apply their own lock. Lock-out scissors, cable or other such multiple lock devices shall be used.

Removal of Lockout- Restoring Equipment to Service

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken:

- Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
- Notify workers of intent to re-energize
- Check the work area to ensure that all employees have been safely positioned or removed from the area.
- Inspect the work area to confirm tools, support or test equipment are clear of danger.
- Verify that guards, interlocks, etc. have been re-installed when applicable.
- Verify that the controls are in neutral.
- Remove electrical jumpers, bypass lines and other such devices.
- Remove the lockout devices and re-energize the machine or equipment. Note: The removal of some forms of blocking may require re-energizing of the machine before safe removal.
- Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.
- When the person who applied the lockout is not available to remove it, due to lost key, absence, or any other reason, the abandoned lock procedure must be utilized. The removal of a lockout device has serious consequences and must not be taken lightly.
- Re-energize

- Confirm the system is operating properly and safely.

Abandoned Lock Policy

Due to potentially serious implications, a member of the BB Project Team must authorize the removal of a lockout device without a key. The [Abandoned Lock Form](#) is to be completed and followed for this purpose (see attachment).

Other Energy Sources

Lock-out tag-out must be used isolate hazards associated with energy sources such mechanical, hydraulic, pneumatic, etc.

1. For piping systems, lock out both inlet and outlet valves. Relieve pressure by bleeding or flushing. Ensure lock out prevents buildup of pressure.
2. For mechanical systems, place the equipment in the relaxed position or block the equipment to prevent movement. Use lock out devices to secure the block.

Coordination of LOTO among multiple trades

When more than one trade will be affected by LOTO, coordination must take place. BB Project Management & Supervision will ensure that coordination has occurred and is properly documented on a written procedure, job hazard analysis, and pre task plan.

LONE WORK

Whenever personnel work alone, such as in a confined space or an isolated location, the supervisor must account for each worker by sight or by verbal communication throughout each work-shift at regular intervals appropriate to the job assignment; and, at the end of the job assignment or at the end of the work-shift, whichever occurs first.

Supervisors must assess the hazards of the workplace; talk to the workers about their work and get their input on possible solutions; avoid having a lone worker whenever possible, especially for jobs with a recognized risk; take corrective action to prevent or minimize the potential risks of working alone; provide appropriate training and education; establish a check-in procedure; ensure regular contact is kept with all workers; establish ways to account for people (visually or verbally) while they are working; schedule high-risk tasks to be done during normal business hours, or when another worker is capable of helping when an emergency is present. Supervisors shall ensure rapid assistance to workers in the event of an emergency.

It is important that a check-in procedure be in place. The supervisor will decide if a verbal check-in is adequate, or if the employee must be accounted for by a visual check. Supervisors must make sure the plan is appropriate for both regular business hours as well as after main office hours.

Supervision and/or designated representatives must account for personnel by visual or verbal communication. Acceptable means of visual communication may include video surveillance or in-person visual contact. Acceptable means of verbal communication may include the use of mobile phones, two-way radios (walkie-talkies), in-person talking, or intercom systems.

MATERIAL HANDLING

1. Personnel engaged in rigging loads must be certified and trained accordingly. Personnel who perform multiple-lift rigging must be provided training on the specific hazards of multiple lifts, the procedures, and equipment. Equipment operators must be trained on the specific piece of equipment, its limitations, and appropriate attachments.
2. Material handling must not be conducted overhead of personnel or the public. A Controlled Access Zone (CAZ) must be established to restrict access.
3. Occupied buildings must be vacated if there is a potential for suspended loads to be dropped.
1. Horns, whistles, or other audible warnings should be sounded to warn personnel when loads are to be moved overhead.
2. Free-rigging, picking / suspending a load with a single fork while using tele-handlers such as rough terrain forklifts will not be permitted. Approved / Engineered lifting systems for this type of operation must be utilized.

General Material Handling Requirements:

- Make eye contact with all operators on powered material handling equipment
- Do not attempt to catch falling objects
- Tag lines must be used if loads could possibly swing or need to be manipulated by hand
- Wire rope shall not be burned off with heat. Any wire rope with welding damage must be discarded
- All loads must be made secure before moving or transporting
- Mark special custom-design grabs, hooks, clamps, or other lifting accessories to indicate the safe working loads.
- Lifting devices must be rated with limits, and equipment they are attached to (e.g. forklifts) must be designed and approved for those attachments
- All rigging equipment will be designed, proof tested and certified with a 5:1 safety factor
- Only drop-forged shackles and wire rope clips are permitted
- Job-made/custom-fabricated lifting hardware and attachments are prohibited unless designed by a Registered Professional Engineer and BB is provided with documentation.
- Palletized loads are not to be lifted with rigging (only lifted by forks)
- When workers could be exposed to injury from rigging failure, a pick plan must be developed with a rigging diagram illustrating component capacity. The capacities of rigging hardware must be marked on the device, and not exceeded
- Rigging hardware must be designed for the application and environment in which it will be used
- When not in use, rigging equipment must be stored properly
- Never block an aisle or walkway with materials or equipment
- Loads must not be swung or suspended over workers
- Equipment removed from service must be tagged with an "Out of Service" tag
- Load-line fittings are not allowed to contact the rigging block sheave
- Lifting will not take place if winds exceed 25 mph unless discussed with and approved by the lift director

Slings

- When slings are applied to sharp-edged loads, the sharp edges must be protected with softeners sized appropriately to prevent damage to the slings.
- All slings must have legible tags. If the tags are no longer legible, slings must be discarded so they cannot be used again.
- Slings should be double-wrapped when used in choke applications. Softeners shall also be used to prevent slippage.

Hooks

- All hooks shall have functioning safety latches. Hooks and other rigging components shall be attached in a secure manner. Hooks and other lifting attachments on the buckets of front-end loaders, and backhoes are prohibited from use unless used in accordance with the manufacturers specifications designed and certified by a professional engineer.
- Open hooks shall only be used when attaching or disconnecting the hook would place a worker in a dangerous position. A Job/Activity Hazard Analysis must be used to establish the hazards and methods to protect against those hazards involved in the use of open hooks.
- Hooks shall be visually inspected prior to use to verify safe working condition. Hooks shall be removed in accordance with the hook manufacturer's specifications, some criteria for removal from service are:
 - Evidence of cracks;
 - Wear exceeding 10 percent of original dimension;
 - A bend or twist exceeding 10o from the plane of the unbent hook;
 - Increase in throat opening exceeding 15 percent of original dimension;
 - Missing or improperly functioning safety latch;
 - Any modification, i.e. grinding or welding.

Come-Alongs and Chainfalls

Come-alongs and chainfalls shall be used in accordance with manufacturer specifications and legislative jurisdictional requirements. When chainfalls are used as a rigging component with a mobile crane, the lifts shall be deemed a critical lift.

Come alongs and chainfalls shall:

Be inspected for internal/external wear and be proof tested prior to use and every 12 months thereafter;

- Have the capacity identified;
 - Have all components, including the hook, rated in consideration of the required safety factors, of a sufficient capacity for the hoist;
 - Not have the chain wrapped around the load for hoisting; and
 - Have load limiters, if so equipped, set at or below the safe working load
- Come-alongs and chainfalls shall be removed from service if there is:
- Any evidence of slipping or failure;
 - Any evidence of cracks, damage or other defects on the body or handles;
 - Excessive wear, stretch or deformity in the chain; or
 - A direction or recall from the manufacturer.

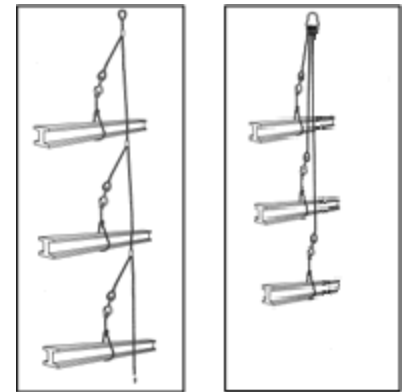
Inspection and Testing of Rigging Components

- Rigging components shall have a documented inspection prior to initial use on the project and defective rigging shall be tagged and removed from service.
- All spreader bars, lifting beams, links and other rigging components designed and certified/stamped by a professional engineer will be tested/inspected prior to initial use.
- Proof test all below-the-hook rigging devices prior to initial use to 125 percent of their rated load.
- Daily inspections must be performed and documented on all rigging and material handling equipment by a qualified person. For a sample form, please see the attached [Daily Rigging Inspection Checklist](#).

Multiple-lift rigging procedure

A multiple lift is only to be performed if the following criteria are met:

- A multiple lift rigging assembly/bridle is used (one device with one eye attached to the hook);
- A maximum of three members are hoisted per lift;
- The multiple lift rigging device has a capacity based on the manufacturer's specifications with a five to one safety factor for all components;
- Only beams and similar structural members are lifted (no bundles of decking); and
- All employees engaged in the multiple lift have been trained in these procedures.



The multiple lift rigging assembly must be rigged with members:

- Attached at their center of gravity and maintained reasonably level;
- Rigged from top down; and
- Rigged at least seven feet (2.1 m) apart.

The members on the multiple lift rigging assembly must be set in place from the bottom up.

PRESSURE TESTING

Subcontractors engaged in hydrostatic or pneumatic pressure testing of lines must submit a detailed plan and completed [Pneumatic Test Permit](#) (for Pneumatic Testing—not hydrostatic) to Balfour Beatty (BB) prior to any pressurization of piping systems and/or the use of pneumatic plugs.

Pressure Testing – Subcontractor Plan Requirements

The plan must, at a minimum, address the following:

- Reason for Pressure Test – Reference applicable contract requirements specification.
- Planned Test Pressure
- Planned Duration of Test
- Lock Out / Tag Out Program
- Written procedure for test which includes:
 - Test site preparations and related precautions including removal of unauthorized personnel, isolation of test site and a determination of the restricted distance for the pressure test. The restricted distance is the distance from the item(s) under test at which barriers and warning signs are placed to prohibit access.
 - Automatic pressure relieving device (pressure relief safety valve), which must be sized to handle the maximum output of the pressure source and set at not more than 110% of planned test pressure to prevent excessive pressure during testing.
 - Restraint Methods of Piping System
 - Names of test supervisor, participants, and their qualifications/training
 - Ratings of connections and fittings, including those used solely for testing purposes must be rated for pressure equal or greater than the system piping.
 - Activity/Job Hazard Analysis (AHA/JHA) and Pre Task Plan (PTP) written for the activity, reviewed with BB and test crew immediately prior to testing.

Each employee required to wear a respirator must be trained before the first use. The training must be comprehensive, hazard/task specific, and repeated annually or more often if necessary. This training must include:

- Limitations and capabilities of the respirator
- Respirator use during emergencies or when a respirator malfunctions
- Reasons why respirators are required
- How improper fit, usage and maintenance can adversely affect the respirator
- How to inspect, put on and remove, use and check the seals of the respirator
- Maintenance and storage procedures
- How to recognize medical symptoms that limit or prevent the use of respirators
- The requirements of applicable federal and state regulations

SILICA

Respirable Crystalline Silica (RCS):

Each contractor engaged in a task that releases dust containing silica at the Action Level 25 µg/m³ must submit a Written Silica Exposure Control Plan to the Balfour Beatty project team, in order to avoid worker exposure for their own workers and other personnel. . For assistants creating a plan reference www.silica-safe.org. The plan will meet criteria set forth by [CFR 1926.1153\(g\)](#) and also include:

- Specific tasks that could release silica (Exposure assessment).
- Anticipated location, start and end dates for each task.
- Competent Person designation with (Mandatory) 3 hour Silica Training Certification
- Specific Exposure Control Methods to reduce or eliminate silica release per [CFR 1926.1153\(c\)\(1\) Table 1](#) (e.g. wet sawing or drilling, misting of dust, use of local exhausted power tools).

These plans will be shared with all contractors involved on the project who will review and incorporate them to avoid potentially significant exposures. Sometimes this may involve temporarily suspending operations in a specific area during a silica activity or scheduling the work activity for off hours.

Procedures:

All workers exposed to silica dust must wash their face and hands prior to smoking, drinking, eating and at the end of the shift.

Eating, drinking, smoking, use of chewing gum or tobacco is prohibited in all areas contaminated with silica dust.

Dry sweeping or dry brushing is not permitted along with the use of tools such as air compressors, leaf blowers, etc. to clean clothing or work surfaces that could contribute to the exposure of RCS on Balfour Beatty job sites.

To the extent feasible, all worker vehicles should be parked away from an anticipated silica dust generating operations.

Workers with anticipated exposures at or above the OSHA Action level of 25 micrograms per cubic meter of air must wear protective clothing (i.e. disposable Tyvek suit or washable work clothing) that stays on site. In some situations thoroughly vacuuming worker clothing with a HEPA filtered vacuum may be sufficient.

Air monitoring should be conducted to determine an Exposure Assessment at job sites where there is a potential for silica exposure at or above the action level. The purpose of the monitoring is to ensure that the appropriate level of respiratory protection and control method are chosen.

A reassessment of exposures will be conducted when a contractor has any reason to believe that new or additional exposures at or above the action level have occurred for the following:

- change in the production
- change in process
- change of control equipment
- change of personnel or work practices.

Engineering control methods may involve the following:

- Wet sawing
- Wet drilling
- Water mist or fog to control dust clouds
- HEPA filtered local exhaust power tools
- Enclosed, filtered, air conditioned equipment cabs
- Non-silica containing abrasives for use in abrasive blasting
- Housekeeping to minimize accumulation of silica-containing waste (spent abrasive, drilling/grinding dust)

Clean up and containerize waste as soon as feasible after generation (HEPA vacuum, or wet sweeping only)

Administrative controls can be used in conjunction with engineering controls to further reduce the likelihood of worker exposure or to minimize the number of workers who are over exposed. These administrative controls may include:

- Contractors who anticipate doing silica dust creating work should notify other contractors as far in advance as possible as to the location, date, start time and duration.
- Contractors will to the extent feasible, limit silica generating work to off hours, or coordinate times when other contractors can vacate the immediate work area.
- Contractors will leave the immediate work area while other contractors are conducting silica-generating operations above the 25 µg/m³ Action Level
- All areas with silica-generating activities will have silica warning signs posted at all access points and the area flagged off if necessary to prevent unauthorized workers from entering during silica generating operations. For example:



Rotating workers from high silica exposure jobs to low exposure jobs during the day. All workers must be trained to a Hazard Communication level awareness of silica. This training should cover the following topics:

- Adverse health effects of silica.
- Tasks, locations, jobs that may generate silica dust.
- Methods, equipment, procedures to be used to minimize dust generation and importance of following procedures.
- Methods used to determine worker exposure.
- Need to avoid silica-generating activities and to vacate the area if feasible when a silica generating task is started.
- Availability of any medical records that may be generated.
- Availability of any air monitoring records that may be generated.

(See also [Corporate Policy](#))

RESPIRATORY PROTECTION

Subcontractors are required to develop and implement a written respiratory protection program for situations in which permissible exposure limits of airborne contaminants could be exceeded or when the subcontractor requires use of respirators by workers. Respiratory protection must follow 29 CFR 1910.134.

The written program shall be submitted to the BB Project Team and shall address voluntary respirator use; respirator selection; medical evaluations; fit-testing; use of respirators; user seal checks; maintenance and care of respirators; identification of filters, cartridges and canisters; employee training; and program evaluation. The standard requires the respiratory program to be administered by a program administrator and updated to reflect the changing workplace conditions that affect respirator use. Applicable federal and state requirements should be addressed to ensure adequacy of written respiratory protection programs.

When subcontractor employees voluntarily wear respiratory protection, the subcontractor shall establish and implement written respiratory program components related to the medical evaluation of a worker's ability to wear the respirator safely. Elements relating to cleaning, storing and maintaining respirators must be addressed, as well. Applicable federal and state requirements should be addressed regarding requirements for employees who voluntarily wear respiratory protection.

Medical Evaluations

Respirator use puts a physical burden on the human body; prior to use of a respirator, a worker must be declared medically fit to wear one through a medical evaluation.

Fit Testing

Fit testing is required before any employee wears a respirator. A quantitative fit test (QNFT) or qualitative fit test (QLFT) must be conducted to ensure the proper make, model, size and style of respirator is selected by an employee. Applicable federal and state requirements provide protocol that must be followed when conducting the fit testing.

Additional fit tests are required:

- When a different face piece, size, make or model is used

- When the employee reports or the contractor, PLHCP, supervisor or program administrator observes changes in the employee's physical condition that could affect the fit of the respirator
- At least annually

Record Keeping

Medical evaluations must be kept by a contractor for duration of employment plus 30 years, in accordance with federal and state requirements. Fit-test records should be kept for the current year. When a new fit test is performed, the old fit test may be discarded.

SCAFFOLDING

Required Submittals for Scaffolding Erectors & Suppliers:

- Site-Specific Safety and Health Program that includes Scaffolding
- Pre-Task Plan (PTP) and Job/Activity Hazard Analysis (J/AHA)
- The name(s) of the Qualified Person designated by the Subcontractor. Documentation of the Qualified Person's training, experience and knowledge of the type of scaffolding being erected by the Qualified Person.
- The name(s) of the Competent Person. Documentation of the Competent Person's training, experience and knowledge of the scaffolding to be erected.
- Valid documentation from the manufacturer of the scaffolding that proves through specific signed and stamped documentation that the scaffold complies with applicable scaffold regulations. The documentation shall include, but not be limited to:
 - a) Testing performed in accordance with the Scaffolding Shoring & Forming Institute's SC 100-05/2005 (or most current test standard) recommended testing standard. Information on the SSFI SC 100-05/2005 standard can be found at www.ssfi.org.
 - b) Testing other than SSFI SC 100-05/2005 shall be equivalent and performed under the supervision of a qualified registered Professional Engineer who is licensed in the State where the testing was performed and where the scaffold is to be used.
 - c) Based on valid testing, the Subcontractors scaffold provider and/or erector shall provide the Maximum Allowable Loading per scaffold leg or per scaffold frame.
- Scaffolds manufactured *outside* of the continental United States shall have valid documentation to prove the scaffolding meets applicable regulations and has been tested in accordance with the Scaffolding Shoring & Forming Institute's (SSFI) SC 100-05/2005 recommended testing standard. Valid testing documentation must be submitted indicating that the paint and/or coating(s) on the scaffold components do not contain any hazardous materials such as lead, chromium, etc.
- Scaffolds that are designed by a qualified registered Professional Engineer (P.E.) shall include, at a minimum, the following documentation:
 - b) Drawings of the bracing pattern(s) for the scaffolding;
 - c) Drawings of the types and locations of the ties between the scaffold and the structure (tension, compression and sway ties);
 - d) Written instructions on how to erect the scaffolding;
 - e) Written instructions on how to inspect the scaffolding;
 - f) The maximum allowable loading per scaffold bay and scaffold tier;

- g) Any other information the P.E. deems necessary to erect, inspect and maintain a safe scaffold;
- h) The allowable deflection in a scaffold leg (when the leg is measured from the uppermost frame to the bottom of the supporting frame at ground, deck or floor level).
- i) The method of accessing each working level (tier).
- j) The areas where the scaffold can be enclosed with a tarp or other approved enclosure material.
- k) The locations and types of ties to be used when a scaffold is fully or partially enclosed.

Required Submittals for Scaffold Users:

- Site-Specific Safety and Health Program that includes Scaffolding
- Pre-Task Plan (PTP) and Job/Activity Hazard Analysis (J/AHA)
- The name(s) of the “Competent Person” and/or “Qualified Person” designated by the Subcontractor
- Proof of scaffold awareness training for all users

Scaffolding Erection & Dismantling Requirements:

- Scaffolds are to be erected, modified or altered and dismantled under the supervision of a Competent Person and with good engineering practices.
- Erecting and dismantling of scaffolding shall be performed using fall protection systems at an elevation of six feet or greater unless approved in writing by BB. Scaffold erection must be done with 100% fall protection.
- Erectors must have training on fall awareness, site-specific fall hazards, fall protection equipment to be used, and rescue procedures.
- If erectors tie off to scaffold components, written approval must be granted by scaffold manufacturer.
- *It is highly recommended* that interior drop-down ladders or exterior stair towers be used in lieu of typical exterior ladders. See the attachment for [Ladder and Scaffold Alternatives](#).
- Scaffolds must be fully planked with scaffold-grade planks. Planks shall overhang the ledger or support by a minimum of 6” and a maximum of 18”.
- Scaffolds more than 3x (CA) 4x (AZ) higher than they are wide must be stabilized.
- Pins must be in place at all connections throughout the scaffolding.
- Scaffolds must be setup level and on a firm foundation.
- Handrails, mid rails and toe boards must be provided on all scaffold types, walkways, and bridges where the platform height is 2' or higher above an adjacent surface and within six feet (6') horizontally. When handrails and mid rails are not in place, an alternative fall protection system is required.
- All guardrail systems shall include toe boards throughout the entire system. Toe boards must be installed with a minimum of 1”x 4” inches nominal height. If an exterior screen extends from the ground to the top platform of the scaffolding, toeboards are not required.
- Cross braces will NOT be used as a top or mid-rail. Horizontal members must be installed on all guardrail systems where the scaffold platform is elevated six feet or greater.
- Rolling scaffolds shall be equipped with locking wheels, guardrails, diagonal bracing (if applicable) and outriggers (when applicable).
- Each scaffold shall be designed and constructed using a dead load safety factor that will ensure the scaffold supports, without failure, its own weight and 4 times the maximum intended working (live) load applied or transmitted to it.
- Scaffold planks shall meet the current safety criteria in ANSI A10.8, 29 CFR 1926 Subpart L, Southern Yellow Pine Inspection Bureau, West Coast Inspection Bureau and/or manufacturer’s recommendations.
- Scaffolds shall be erected in accordance with the scaffold manufacturer’s recommendations.

- Scaffolds that cannot be erected in accordance with the scaffold manufacturer's recommendations shall be designed and evaluated by a Qualified Registered Professional Engineer who is registered in the State where the work is being performed.
- Controlled Access Zones must be established around scaffolding erection/dismantling areas to prevent other personnel from being exposed to potential struck-by hazards.
- When scaffold trusses (put logs) are used in conjunction with the scaffolding, the Subcontractor/scaffold company/scaffold erector shall provide:
 - The Maximum Allowable Loading per bay or per square foot that is supported by the trusses (put logs).
 - Installation, use and inspection requirements (in accordance with the manufacturer's recommendations and qualified engineering services).
 - Specialized conditions and/or situations will have to be identified prior to submitting the scaffold bid. These conditions will be identified and the bidder shall provide valid documentation that the scaffold set up and use is in compliance with applicable regulations and scaffold manufacturer's recommendations.
- All scaffold components shall be installed by the Competent Person per manufacturer specification.
 - Scaffolding that has not been erected in a manner that allows for all its parts to fit together as was originally intended by its manufacturer shall not be utilized.
 - Tie wire shall not be utilized as a method for securing scaffold sections or components together unless expressly recommended and indicated in writing as being approved by the scaffold manufacturer. Tie wire shall not be used to take the place of the scaffold manufacturer's standard guardrail system components.
 - Not all types of scaffolding will work for any given geometrical configuration. For example, Tubular Weld sectional scaffolding would not be the proper choice for the Competent Person to erect around a circular structure-- tube and clamp (coupler) would be the appropriate selection for that configuration.

Scaffolding Inspection & Tagging Requirements:

- The following requirements for inspecting and tagging shall be used for all types of scaffolding including all rolling and portable scaffolds.
- Scaffolds must have a documented inspection by each Subcontractor's competent person;
 - daily before each shift; or
 - after any occurrence that might compromise its structural integrity.
- After inspection, if the scaffold is deemed safe, each Subcontractor's competent person must sign and date a green tag at the base of each scaffold ladder or access way to indicate the scaffold is safe to access and use.
- After inspection, if the scaffold is deemed unsafe, each competent person must place a red tag at each ladder or access way to indicate the scaffold is not currently safe to be accessed.
- All scaffolds will be red tagged every evening or at the end of the work shift and green tagged before use.
- Please see the attachment for a sample [Scaffold Inspection Checklist](#).

Scaffolding User Requirements

- No objects and/or equipment shall be used on top of scaffold platforms to increase work height.
- Never leave a scaffold in an unsafe condition.
- Never climb scaffold braces or guardrail systems-- use the proper ladders and stairs.
- Check for capacities and do not overload.
- Rolling scaffolds wheels shall be locked when work is being performed. Surfing, skating, and riding is prohibited unless proper braking mechanisms are installed and the floor is free of surface encumbrances or obstacles.

- Perry type and other similar types of rolling scaffolds platforms shall have guardrails installed when used as a working platform.
- Prior to any modification of scaffolding (i.e. guardrail removal) the competent person who owns control of the scaffolding must be notified and approve any modifications of the scaffolding. The Competent Person must red tag the scaffold prior to and during the course of modifications. Also, the subcontractor's competent person must ensure that affected personnel are notified.
- When forklifts/tele-handlers are used to hoist equipment/material onto scaffolding, a Controlled Access Zone must be established around the forklift to prevent other personnel from being exposed to potential struck-by hazards.
- Covered walkways shall be provided to protect personnel entering / leaving the building(s) from falling materials during construction.

STEEL ERECTION

Steel erection activities include hoisting, connecting, welding, bolting, and rigging structural steel, steel joists and metal buildings; installing metal deck, siding systems, miscellaneous metals, ornamental iron and similar materials; and moving from point-to-point to perform these activities.

Subcontractors engaged in steel erection shall attend the Steel Erection Preconstruction Meeting and shall complete and submit to the BB Project Team a Site-Specific Steel Erection Plan that meets or exceeds the content on the [Site-Specific Steel Erection Plan Outline](#).

Personnel must be trained according to the tasks they're engaging in. Typically, most steel erection personnel will need at least one of the following trainings/certifications:

- Certified crane operator
- Certified rigger
- Certified signal person
- Aerial work platform training
- Welding certification as applicable
- Connector training
- Steel erection training requirements:
 - Multiple lift rigging procedures
 - Connector procedures
 - Controlled decking zone procedures
- Ladder selection and use
- Fall Hazard Training:
 - Recognition and identification of fall hazards in the work area
 - The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used
 - The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used
 - The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and the fall protection requirements for structural steel erection
 - Procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used
 - Site-specific fall prevention plan

UTILITIES UNDERGROUND

Utility Locating Requirements

Subcontractors whose scope of work involves the penetration of the ground whether by hand or mechanical means shall locate and identify all utilities prior to the start of penetration. Activities covered by these requirements range from saw cutting, jackhammering, coring, trenching, excavating, demolition, boring, drilling, grading, mass excavation, etc.

For excavation activities, please also refer to [Excavation](#). When utilities will be shut down/isolated/de-energized/etc., [lock out tag out procedures](#) must be followed.

Subcontractors shall:

1. Attain as-built drawing(s) if available.
2. Contact Dig Alert by calling 811. The website for Dig Alert is www.digalert.org.
3. Hire a ground-penetrating radar company to verify utility locations of ALL surfaces to be penetrated.
4. Utilize issued orange Activity Notification Flag and Vest for equipment and operators

Required Submittals for Subcontractors

For activities involving the penetration of the ground's surface, the Subcontractor shall submit the following in addition to typically required safety documents prior to starting work:

- The name(s) of the designated "Competent Person" with supporting documentation indicating training and competency. (No excavating or work in excavations will be allowed without the Competent Person onsite and supervising these operations at all times).
- A Job Hazard Analysis that adequately addresses the task(s) involving penetration of the ground's surface and safe measures for preventing utility strikes.

Pre-Dig Meeting

A mandatory pre-dig meeting will be held for any scope of work involving the penetration of the ground whether by hand or mechanical means. The meeting should be held no later than **two weeks prior** to the start of work.

Each applicable subcontractor shall ensure the attendance at this meeting by their foreman, operator, and crew.

Strike Prevention Procedures

Every effort must be made to **remove or de-energize utilities as the first** order of business.

If a utility is properly identified, shut down, and "safed off" via lock out tag out, and the utility is struck during an activity, BB does **not** consider the event a utility strike, but it **would be considered property damage** and must be repaired by the party responsible for the damage.

Note, **lock out tag out must be performed by a qualified person and testing must verify a zero-energy state for the utility.**

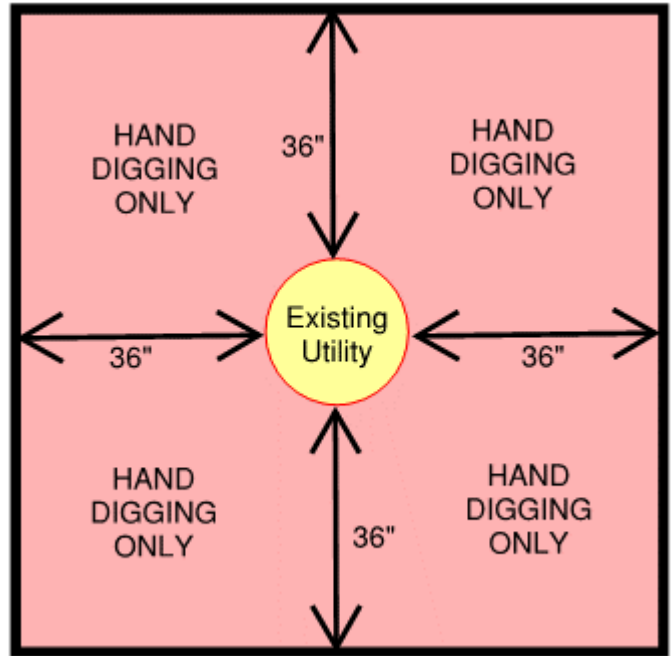
When within three (3) feet or 36 inches in any direction of known utilities that are energized, hand digging or vacuum excavation is required.

Potholing Procedures

Potholing is performed to verify the location and depth of utility lines and potholing procedures shall be followed to prevent damage to the identified underground utilities. Before ground-penetrating activities begin, potholing for the utilities will take place. Potholing will be done using hand labor or a vacuum excavation system. NOTE: Utilities typically identified by locate services have a three-foot safe zone. In other words, the utility should be within a three-foot zone of either side of the markings.

Potholing will be performed to locate the utility. The utility **MUST** be found prior to the start of excavation operations.

The soil must be excavated in 6" lifts (approximately) by hand to verify that no utilities are present. If utilities are located, then the utilities must be exposed by hand. The proper tools that can be used for handwork are shovels and pry bars (or other tools of this nature), OR vacuum excavation systems. At no time should a pickaxe or other similar tools be used. Before using a vacuum excavation system, contact the utility owner to determine if the utility owner will allow the use of a vacuum system. Not all utility owners allow the use of vacuum systems for locating the utility.



Do not assume that the utility will continue on the same line and grade. If any damage occurs to any line, contact the utility company, the utility engineer and the project superintendent IMMEDIATELY. An Incident Report must be completed IMMEDIATELY by the BB Project Team. **All existing utilities will be located, marked and visually verified prior to starting any operation. Locate markings must be protected as applicable. It is recommended that time-stamped photos be taken of markings prior to breaking ground.**

Underground Utility Pothole Spacing and Frequency - Any deviation from this procedure will require approval from the BB Project Manager. The following spacing and frequency requirements will be followed on all projects:

Life threatening utilities such as gas, forced sewer mains, water mains and electrical services will be exposed through the entire length of the excavation.

Gas and electric lines within 25 feet of your work area will be potholed and marked every 25 feet to verify that the line has not changed directions.

Gas and electric lines outside the 25 feet of the work zone will be potholed at least once on each end of the limits of the excavation to verify Underground Service Alert and the utility plans.

Communication Lines- **Fiber-optic lines** will be potholed **every 25 feet** within the work area. **Telephone/Cable lines** will be potholed **every 50 feet** within the work area. IF there is any damage to a fiber optic line, DO NOT LOOK INTO THE FIBER OPTICS. THE LIGHT WAVES GOING THROUGH THE FIBER OPTICS CAN CAUSE SERIOUS EYE INJURIES.

Other Utilities:

Will be potholed every 25 feet for lines less than 8" in diameter.

Will be potholed every 50 feet for lines 8" though 24" in diameter.

Will be potholed every 100 feet for lines greater than 24" in diameter.

At least two (2) potholes must be obtained for each utility within the work zone regardless of the size of the work area.

Utilities in Roadways

Utilities that are located within the roadway will be potholed.

Street plates will be obtained to cover a pothole when there is live traffic on the roadway. The street plates shall be of sufficient size and thickness to allow traffic to safely drive over them by pre-grind to allow the trench plates to be flush with the horizontal plane. The street plates shall be secured in place in accordance with the local, state and/or federal requirements.









For roadway work not scheduled to be excavated in the current operation, an asphalt patch will be placed over the pothole. This will be done after all pothole information has been recorded and the pothole has been offset using stakes and ribbon.

Utility Locating

Subcontractors shall locate and identify all utilities prior to the start of ground-penetrating activities. Equipment operators must understand the locations and types of utilities.

Prior to the start of any excavation a utility locate service must be contacted. Each state has a different locate service with specific rules outlining their services. It is very important to understand the state or local guidelines in advance of your excavation. Typically locate companies require 2 days advanced notice before performing a locate. Before calling for locate services, the excavation area must be pre-marked with white paint, stakes or flags. In addition, newly constructed work IS NOT covered (i.e. drainage, electrical subcontractor new installations, etc.) and shall be located by other means. The Subcontractor engineer, foreman, or superintendent responsible for this work will be contacted to verify what has been constructed and an appropriate as-built requested. The One Call service can be contacted by calling 811. The website for Dig Alert is www.digalert.org. **Ground penetrating radar WILL be used to verify utility location prior to digging/cutting ALL surfaces.**

Utility Color Markings - The following colors and symbols have been adopted by all utilities for marking underground utilities:

	Blue	Water
	Orange	Telephone, Railroad, Cable TV
	Green	Sewer, Storm Drain
	Red	Street Lighting, Electric, Traffic Signals (may be orange)
	Yellow	Gas
	Pink	Survey
	White	Proposed Excavation
	Purple	Reclaimed Water, Irrigation, and Slurry Lines

Dig Permits

A [Dig Permit](#) is required for all operations which penetrate the original ground surface. The Subcontractor foreman of each operation is responsible for ensuring that the Dig Permit, Job Hazard Analysis (JHA) and Pre-Task Plan (PTP) and all necessary drawings are available at the operation and in the cab of the excavator, backhoe, etc. The operator is ultimately responsible and will be held accountable to ensure the operation does not proceed without a valid Dig Permit. The BB Superintendent will verify that the Dig Permit has been properly completed and will assign an orange flag and vest to the approved operator and equipment. The following documents will be attached before being distributed to the foreman and operator:

- A signed copy of the Job Hazard Analysis (JHA).
- A Pre-Task Plan (PTP) must be completed by the crew and signed by all members.

- The page of the Topography & Utility Plan sheets for the work zone that the permit covers. Any utility relocations that have been completed before the start of the operation must be clearly noted on these drawings.
- A copy of the Utility Plan sheets for the work zone the permit covers. Notes and highlights must be made on these drawings to indicate which runs have been installed.

Unintentional Uncovering of a Utility (known or unknown utility)

If during the course of excavation a utility has been exposed, it is the Subcontractors’ responsibility to inspect and support these facilities prior to backfilling. If damage of any kind is discovered, or any suspicion of damage exists, call the utility engineer so documentation can take place. The utility engineer will then notify the utility owner.

All unidentified underground utilities that are discovered during the course of excavation activities shall be marked on the As Built Plans and the BB Project Manager shall be IMMEDIATELY notified.

Reporting Requirements

If a utility strike/hit does occur, several reporting steps are required:

- First and foremost, clear and secure the area if there is potential for further exposure to hazardous environments.
- Contact the appropriate utility owner to inform them of the damage so they can inspect and repair, if necessary.
- Notify the Utility Engineer and BB Project Superintendent.
- The Subcontractor shall complete the Incident Report Form and transmit it to the BB Project Manager.

UTILITIES OVERHEAD

1. Any equipment having the ability to work under, cross underneath, and/or reach over overhead electrical lines will follow the guidelines set forth by OSHA in 1926.1408, 1926.1411, & 1926.600. BB recommends that equipment working in close proximity to overhead electrical lines be equipped with a Proximity Warning Device (PWD) to notify the operator and/or operatives surrounding the equipment of the proximity to the danger zone.
2. If working near overhead electrical lines, the Subcontractor shall install “DANGER OVERHEAD POWERLINES” signs at all designated equipment crossings. This sign must state the voltage of the overhead line. For all other utilities, the Subcontractor will install “DANGER OVERHEAD UTILITY” signs to warn of the overhead hazard. For all other equipment traveling underneath overhead utilities, to include use of on-road or off-road haul trucks transporting dirt / materials to the project a “NO DUMP ZONE” will be established to eliminate dumping within 50’ of either side of the overhead line. The Subcontractor will identify the “NO DUMP ZONE” through the use of signage.
3. Subcontractors shall provide full-time spotter(s) whenever any equipment has the ability to work under, cross underneath, and / or reach over overhead utility lines, for example, electrical, cable, phone, fiber-optic, etc. This spotter will assume no other duty and be equipped with air horn, reflective vest, and red flag.
4. Subcontractor will limit equipment travel underneath overhead utilities to designated areas only. To prevent equipment from traveling underneath lines the Subcontractor shall install the most substantial means of protection. At a minimum, yellow protection will consist of poly rope with red flagging.
5. Subcontractors shall protect all guy wires and utility poles from contact with equipment operating in the area through the use of barricades (water-filled barricade, temporary concrete barrier, or pipe bollards). If installed on a road project and within the clear zone of an active travel lane, all barriers must be installed per the Department of Transportation (DOT) Index & Manual on Uniform Traffic Control Devices (MUTCD).
6. Special attention must be given to identify & safeguard utility cabinets, transformers, in ground utility boxes, etc. Means of identification and protection shall be at a minimum of posts with orange fence installed around the utility.

7. Each day, prior to working in close proximity to overhead utility lines, the Subcontractor shall review and complete an “[Overhead Utility Permit](#)”-- This permit, the Job Hazard Analysis and the Pre-Task Plan must be submitted for review by the BB Project Team prior to commencing any work where overhead utility strikes are possible.
8. Subcontractors who will enter the Minimum Safe Approach Distance of energized or potentially energized electrical equipment shall provide an acceptable non-conductive plan that is approved by an officer of BB.
9. Subcontractors shall maintain distance from electrical lines, apparatus, or any energized (exposed or insulated) parts according to the following. Electrical line sway, tools, and equipment must also be taken into consideration when determining the Minimum Safe Approach Distance.

Minimum Safe Approach Distance Chart on next page...

Voltage Range (phase to phase)	Minimum Safe Approach Distance
0 to 50KV	10'
Over 50KV to 200KV	15'
Over 200KV to 350KV	20'
Over 350KV to 500KV	25'
Over 500KV to 750KV	35'
Over 750KV to 1000KV	45'

Electrical lines >50,000 volts require one foot additional clearance for every additional 30,000 volts

VEHICLES

1. A valid driver’s license is required for operating any vehicle or heavy machinery on the job site or corresponding right-of-way.
2. The wearing of seatbelts is mandatory on all equipment at all times. Riding in the beds of trucks, trailers or in/on any vehicle that does not provide safe seating for passengers is prohibited.
3. Posted speed limits must be followed.
4. Cell phone use is not allowed while operating equipment.
5. On-site parking may not be available. Subcontractors are responsible for securing adequate parking for their employees.

WORK AT HEIGHTS

1. Fall protection shall be used by all employees when working six (6) feet or more above the ground/floor or whenever working in a precarious position, unless other adequate fall prevention (guardrails or safety nets) are provided.
2. A Site-Specific Fall Protection Plan (SSFPP) must be developed by each Subcontractor for all work with a fall exposure of six (6)-feet or greater when conventional fall protection will not be used. The SSFPP shall be submitted to the BB Project Manager, BB SH&E Manager and/or BB Superintendent for approval fifteen (15) days prior to commencing work that will involve fall exposure. SSFPPs may be generated using the attached document titled “[Site-Specific Fall Protection Plan Template](#)”. If subcontractors choose to use their own form, it shall have the same content at a minimum.
3. Workers engaged in working at heights are responsible for following their employer’s safety plan and site-specific fall protection plan.
4. Foremen are responsible for ensuring JHAs and daily Pre-Task Plans are completed, understood, and followed by their crew members.
5. Competent persons are responsible for completing daily safety inspections and ensuring that their site-specific fall protection plan is adequate, amended as needed, communicated, and followed by crew members.

6. Subcontractors shall provide copies of the fall protection manufacturer specifications prior to the start of work.
7. "Monitor-Type Systems" are NOT permitted.
8. Personnel whom create a potential fall hazard or tear down, remove, or damage a fall-hazard control shall be fully responsible to correct the hazard immediately. A competent person in fall protection shall inspect the correction to ensure adequacy.

Personal Fall Arrest Systems

- Body belts shall not be used as part of a personal fall arrest system. Only full-body safety harnesses are approved for use as a part of a personal fall protection system.
- Shock absorbing lanyards must be used unless a Self-Retracting Lanyard is in use.
- Wire rope lanyards shall not be used as connectors in a personal fall arrest system unless a wire rope lanyard with an energy absorber is required due to the type of work being performed (welding, cutting, etc.).
- On suspended scaffolds or similar work platforms with horizontal lifelines which may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.
- When vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Fall arrest equipment shall be protected against being cut or abraded. Padding, softeners, etc. must be used to protect equipment from sharp edges.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position. When used for leading edge work, lifelines must be protected from sharp edges.
- Anchorages shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee.
- Personal fall arrest systems shall:
 - limit maximum arresting force on an employee to 900 pounds
 - be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level.
 - have the anchor end of the lanyard secured at a level not lower than the employee's waist.
 - bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.
 - have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.
- The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.
- The employer shall plan and provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
- Personal fall arrest systems shall not be attached to hoists, nor shall they be attached to guardrails.
- When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the working level or working area.
- Each personal fall arrest system shall be inspected not less than twice annually by a competent person in accordance with the manufacturer's recommendations. The date of each inspection shall be documented.
- Personal fall arrest systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.

Positioning Device Systems

Positioning device systems and their use shall conform to the following provisions:

- shall be rigged such that an employee cannot free fall more than 2 feet.
- when working over 6', must be used in conjunction with a personal fall arrest system.

Personal Fall Restraint

- All Lanyards used for fall restraint are to be as short as possible and will prevent an employee from reaching a leading edge.
- When a fall restraint system is used for fall protection from an aerial lift or a boom-type elevating work platform, the lanyard and anchor must be arranged so that personnel are not potentially exposed to falling any distance.
- Anchorage points used for fall restraint shall be capable of supporting 4 times the intended load.

Additional fall protection requirements

- During break periods, personnel shall fully remove and properly store full-body harnesses.
- All fall arresting, descent control, and rescue equipment shall be used in accordance with the manufacturer's recommendations.
- Any fall protection equipment subjected to a fall shall be immediately removed from service and shall not be used again.
- Lifelines and anchorages shall be capable of supporting a minimum dead weight of 5000 pounds.
- Safety net systems and their use shall comply with applicable Federal, State, and Local Regulations.
- Control measures must be established to prevent material, equipment, tools, etc from falling to lower levels where personnel may potentially be struck. Tool tethers/leashes and restricted areas below overhead work are acceptable means of protection from falling objects.

Guardrails

Guardrails must be provided at floor openings, open sides, and/or leading edges or personal fall protection must be used. Guardrails or wire cables must follow these requirements:

- Top edge height of top rail/cable must be 42"+ or - 3". (In California, top rails must be 42-45 inches).
- The maximum deflection for the top rail when a load of 200 pounds is applied in any direction at any point on the top rail shall not exceed 3 inches in any direction.
- Mid-rail/cable and toe boards must be installed and able to withstand 150lbs impact force.
- Guardrails or wire cables will not be used for anchoring personal fall arrest/restraint.
- Upright supports for a wood guardrail system shall be spaced no greater than every 8 ft. on center.

Wire Rope Guardrails

- All connections and splices shall be loop-type connections. If the loop is formed to splice two pieces of wire rope together, thimbles shall be used in the eyes formed by the loops and the forged wire rope clips are to be installed in accordance with the manufacturer's recommendations, including torquing the nuts on the wire rope clips to the specified foot-pounds.
- Top rails must have flagging every six feet for visibility purposes.
- Wire rope guardrail runs shall be erected to allow sections to be removed without jeopardizing the entire perimeter when other workers could be exposed to falls.
- The saddles of all wire rope clips used shall be constructed of forged steel rather than malleable steel in accordance with ASME B30.26-2004.
- The installer of the wire rope system must carefully follow the manufacturer's instructions and specifications regarding the number of clips, spacing, clip size for a particular wire rope size and type, rope lay, and torque values.

Warning line systems (Only when conventional fall protection system configurations are infeasible)

Roofing work on Low-slope roofs:

- Each employee engaged in **roofing activities** on low-slope roofs, with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by:
 - a combination of warning line system and safety monitoring system.

Training

Subcontractors shall train each employee exposed to fall hazards in the following areas:

- The nature of fall hazards in the work area;
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, controlled access zones, and other protection to be used;
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs;
- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection; and
- The role of employees in fall protection plans;

Certification of training

Fall protection certificates shall contain the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer.

Retraining

Circumstances where retraining is required include, but are not limited to, situations where:

- Changes in the types of fall protection systems or equipment to be used render previous training obsolete; or
- Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.

WORKING OVER/NEAR WATER

Subcontractors whose personnel are or may be potentially exposed to working over/near water shall have and follow an adequate Site-Specific Working over Water Plan (WOW Plan). Subcontractors are required to submit the following documentation to BB Project Management & Supervision:

- Site-Specific WOW Plan
 - Job/Activity Hazard Analysis (J/AHA)
 - Pre-Task Plan (PTP)
 - Competent Person
 - Responsibilities
 - Rescue equipment and procedures
 - Lifesaving equipment to be used
 - Fall protection measures
 - Proof of training on:
 - The employer's safety programs and procedures
 - Fall awareness for working over water
 - Equipment to be used (use, installation, maintenance, storage, etc.)
 - Competent person
 - OSHA 30
 - CPR and First Aid

- Site-specific hazards
- Rescue equipment and procedures
- Lifesaving and personal protective equipment

Workers engaged in working over water are responsible for following their employer’s safety program, procedures, and WOW Plan. Foremen are responsible for ensuring JHAs and daily pre-task plans are conducted, understood, and followed by their crew members. Competent persons are responsible for ensuring that their WOW Plan is adequate, amended as needed, communicated, and followed by crew members.

ENVIRONMENTAL REQUIREMENTS

AIR QUALITY MANAGEMENT

Subcontractors must furnish all applicable Air Quality Permits required by the California Air Resources Board, South Coast Air Quality Management District or other local regulatory body for specific operations or equipment being used on site.

Indoor Air Quality

- Safety Data Sheets (SDS) and VOC content of all adhesives, sealants, coatings, paints, carpets, composite woods, etc. must be submitted for review by the BB Project Management Team prior to these products being brought on site.
- Mix, measure, and store materials that emit harmful vapors outside enclosed structures.
- The use of equipment that generates harmful fumes is prohibited inside buildings after close-in, unless scrubbers and/or ducted ventilation are used.
- Adequate ventilation and monitors are required for the use of propane or other gas fired devices indoors or in confined spaces.
- Stored material must be covered, stored off of the deck, and kept in a dry environment. Quantities should be limited to what can be installed in a reasonable time (e.g. two weeks or less).
- Changes in finished areas should be treated as renovations.
 - For dust-generating operations, HEPA filtration and negative air pressure should be used.
 - Tools fitted with HEPA filters may be used to control dust.
- All subcontractors will be required to use sweeping compound.
- All cleaning products used on the project must comply with Green Seal Standard GS - 37 for Industrial and Institutional Cleaners.
- Mold and moisture control is key to proper indoor air quality. Store all absorptive materials to prevent moisture infiltration.

GENERAL ENVIRONMENTAL

1. Use dust control if fugitive dust is observed.
2. Comply with all applicable vehicle and operational air emissions requirements.
3. Save water-- reduce the use of clean water by harvesting and reusing water as much as possible, fix leaks in hoses or water source when observed.
4. Conserve energy usage as much as possible to perform your work activities. To reduce CO2 emissions, using equipment that runs on propane, natural gas, electricity, or batteries is encouraged.
5. Site personnel are encouraged to carpool to reduce CO2 emissions, minimize site disturbance, and maximize the use of available space.

STORMWATER COMPLIANCE

1. Subcontractors shall;

- a. comply with Stormwater Pollution Prevention Plan (SWPPP) to prevent any pollutants into the storm drain conveyance system or infiltrating into the soil;
- b. ensure their materials are covered and off the ground at the end of the day or prior to a rain event, and trash and debris is cleaned up as they work;
- c. ensure their operations use effective and compliant Best Management Practices (BMPs).
- d. report damaged BMPs such as gravel bags, silt fence, or inlet protection to project supervision.

In order to comply with Balfour Beatty's environmental policy, as well as maintain the ecological integrity of our communities, subcontractors shall, at a minimum, comply with all Federal, State, and Municipal stormwater regulations.

2. Property owners who disturb one or more acres of soil or disturb less than one acre, or are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity [Construction General Permit Order 2009-0009-DWQ](#). Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation. The California State Water Resources Control Board issues a Waste Discharge Identification Number to each site, and all site are required to adhere to the Construction General Permit.
3. Subcontractors shall use all best management practices (BMPs) prescribed in the Construction General Permit to minimize the pollutants discharged from construction site into surface water and MS4 systems. These pollutants and best management practices include but are not limited to:
 - Sediment – BMPs such as gravel bags, silt fence, fiber rolls shall serve as effective site perimeter and storm drain protection to prevent sediment from entering surface water or MS4 systems.
 - pH – Concrete, mortar, and stucco wash water have extremely high pH and impair both water and soil quality. The Permit prohibits wash water from contacting the soil or entering storm drains. Watertight washout must be used at all times and switched out when observed to be leaking or %75 full.
 - Concrete washout station shall be provided and maintained by Subcontractor. Subcontractors using concrete, stucco, mortar shall also provide for washout and disposal.
 - Masons – Any trade using a mixing operation must use a contained and bermed area for mixing area to prevent concrete/mortar/stucco from contacting the soil. Prior to application of stucco/mortar to building, 10mm plastic must be laid at the base of the building to prevent stucco/mortar from contacting the soil.
 - All pollutant sources – Concrete, paints, fuels, form oils and any other source of pollution must be prevented from contacting storm water. Such material must be covered and raised, or completely enclosed in a storage container.
 - All subcontractors who store equipment on site must have sufficient drip tubs for their equipment to prevent leaks from contacting the soil, must fix leaks IMMEDIATELY if observed, and must properly dispose of oil/fuel residue prior to and after rain events.
 - Any subcontractors who damage BMPs are responsible for repair or replacement.
 - All subcontractors are responsible for cleaning up their trash and construction waste as they go and disposing of properly.
 - If BMPs are deemed not sufficient by Balfour Beatty Supervision, the subcontractor shall replace or implement the BMPs to meet the required standards.

Erosion and Sediment Control Requirements

- Depending on the location of the project, the local Municipality may be required to review the SWPPP.

- Erosion and Sediment Controls must be installed prior any phase of land disturbance. Example – Perimeter controls, inlet protection, and a stabilized construction entrance/exit must be installed prior the start of grading.
- Perimeter Control must be installed on all areas of the site with slopes or that will receive storm water run-on or contribute to storm water run-off. Example – Fiber roll, silt fence, gravel bags.
- Minimize sediment track-out onto off-site streets and sidewalk from vehicles exiting the site by implementing the following:
 - Restrict vehicle use to only stabilized construction entrances/exits.
 - Utilize effective best management practices at the construction entrances/exits; such as tracking plates, appropriate length of 3” gravel, and tire wash areas.
 - When track-out is observed, it must be removed by the end of the work day by shovel, sweeping, or vacuuming.
- Control discharges from stockpiled sediment or soil by implementing the following:
 - Locate the piles away from any storm drain inlets or surface waters.
 - Provide perimeter controls such as gravel bags, fiber rolls, or silt fence to sediment from flowing outside the stockpile area.
 - Provide cover when possible or stabilization with seed or hydraulic mulch to prevent contact with storm water as well as wind erosion
- Provide dust control at all times through the use of water, vegetation, hydraulic mulch, or non-toxic soil binders.
- Stabilize disturbed slopes through use of fiber rolls, silt fence, hydraulic mulch, vegetation, and geotextile blankets.
- Install inlet protection that effectively removes sediment from storm water on all inlets on and off site where run-off from the site can flow.
- All erosion and sediment control measures are required to be effective throughout the life of the project through routine maintenance.

Pollution Prevention Requirements:

The following pollutants are prohibited from discharging from the site and contacting the soil to prevent leeching and contacting ground water through the use of watertight washouts, cover, and watertight containment:

- Wastewater from washout of concrete
- Wastewater from washout and cleanout of stucco, paint, form release oils and curing compounds.
- Fuels, oils and other hydrocarbons.
- Soaps, solvents and detergents.
- Other toxic or hazardous substance from a spill or other release.

The following construction products, materials, and wastes must have minimal contact to storm water through use of temporary roofs, tarps, pallets, or interior storage:

- Construction material not meant for outdoor exposure.
- Pesticides, herbicides, fertilizers, and landscape materials.
- Diesel fuel, oil, hydraulic fluids or other hydrocarbons.
- Asphalt sealants, adhesives, paints, concrete, stucco, and mortar mixes

WATER INTRUSION

Balfour Beatty ensures that site operations are performed in a way that minimizes the potential for water damaged materials to be utilized for the project. The following are steps that are taken to minimize the potential for water intrusion:

- Deliveries are sequenced to avoid the storage of large amounts of moisture sensitive material at the site for an extended time period
- Building materials are inspected upon delivery and significantly mold impacted materials are rejected

- Moisture sensitive materials are protected from weather elements during delivery and off-loading activities
- Stored building materials are elevated and covered to protect them from weather elements
- Interior partitions are inspected for moisture and mold prior to being permanently enclosed
- Building penetrations are sealed at the end of the work day to avoid moisture infiltration
- Roof and building envelopes are substantially completed before any porous materials are stored in the building
- Wet porous building materials are dried and inspected for mold growth prior to installation
- Moisture limiting design features, such as roofing, flashing, windows, doors, exterior waterproofing and building envelope components are properly installed according to manufacturer's specifications
- Site workers practice good housekeeping
- Site workers are responsible for reporting any unwanted accumulation of water to site management
- Sub-floors are cleaned and dried prior to carpet installation
- Construction debris is removed from within HVAC systems and associated ductwork
- Existing duct work that is to remain in place during renovation activities is sealed with polyethylene sheeting and tape to prevent dust and debris from entering
- HVAC condensate collection and drainage systems are checked to ensure that they are functioning properly

Regular inspections are performed and documented during construction to identify leaks, ponded water and/or sources of water entry

- Moisture/water leaks are responded to within 24 to 48 hours of discovery
- Good communication is maintained between general contractor and other site contractors to remind them of this program and to discuss any water intrusion/mold issues
- HVAC, plumbing and mechanical systems are tested before enclosure

END OF REQUIREMENTS

ATTACHMENTS – TABLE OF CONTENTS

- [Abandoned Lock Form](#)
- [Aerial Work Platform Daily Inspection Checklist](#)
- [BB's Code of Safe Work Practices](#)
- [Competent Person Acknowledgement Form](#)
- [Concrete Pumping Safety Checklist](#)
- [Confined Space Entry Permit](#)
- [Coring and Saw Cutting Checklist](#)
- [Crane Pick Plan](#)
- [Daily Excavation Inspection Checklist & Log](#)
- [Daily Rigging Inspection Checklist](#)
- [Demolition Safety Checklist](#)
- [Dig Permit](#)
- [Disciplinary Action Form](#)
- [Heavy Equipment, Forklift, Tele-Handler Daily Inspection Checklist](#)
- [Hot Work Permit](#)
- [Incident Report Form](#)
- [Job/Activity Hazard Analysis \(J/AHA\)](#)
- [Ladder & Scaffold Alternatives](#)
- [Mobile Crane Inspection Checklist](#)
- [Overhead Utility Permit](#)
- [Pneumatic Test Permit](#)
- [Pre-Task Plan – English](#)
- [Pre-Task Plan – Spanish](#)
- [Project Orientation Checklist](#)
- [Project SH&E Checklist](#)
- [Qualified Person Acknowledgement Form](#)
- [Scaffold Daily Inspection Checklist](#)
- [Site-Specific Fall Protection Plan Template](#)
- [Site-Specific Steel Erection Plan Outline](#)
- [Subcontractor SH&E Submittal Checklist](#)
- [Tele-Handler Forklift Evaluation English](#)
- [Tele-Handler Forklift Evaluation Spanish](#)
- [Tower Crane Inspection Checklist](#)

COVID-19 Prevention Program (CPP)

COVID-19 Prevention Program, Authority and Responsibility

The following guidelines are supplemental to the Balfour Beatty (BB) SH&E Execution Standard – Infection Control to address COVID-19 Prevention Measures. This document shall be readily available in a binder on each jobsite/office and available for review by employees, subcontractors and government officials.

All projects/offices shall implement the following:

Site teams shall ensure supervision and Competent Persons are available on site for all high-risk or high exposure work. No high-risk and high exposure work is allowed otherwise.

Project Managers, Superintendents, and Office Leadership will be responsible for ensuring CPP guidelines are met. Foreman will be instructed on these guidelines to ensure crew compliance. All employees are responsible for using safe work practices, following all directives, policies and procedures, and assisting in maintaining a safe work environment.

Control of COVID-19 Hazards, General Requirements

COVID-19 Site Supervisor(s)

A COVID-19 Supervisor shall be designated by BB on every jobsite/office to monitor the health of employees and enforce the requirements of this document and the site specific COVID-19 plan. **A designated COVID-19 Supervisor must always be present during construction activities.** Subcontractors, under their own Infection Control Plan shall designate a COVID-19 Supervisor for their employees. Depending on work hours, shifts, etc. it would be advisable to have more than one trained/designated COVID-19 Site Supervisor(s).

COVID-19 Safety Training and Instruction

We will provide training and instruction to all essential workers onsite that includes:

- Our COVID-19 policies and procedures to protect employees from COVID-19 hazards.
- Information regarding COVID-19-related benefits to which the employee may be entitled under applicable federal, state, or local laws.
- The fact that:
 - COVID-19 is an infectious disease that can be spread through the air.
 - COVID-19 may be transmitted when a person touches a contaminated object and then touches their eyes, nose, or mouth.
 - An infectious person may have no symptoms.
- Methods of physical distancing of at least six feet and the importance of combining physical distancing with the wearing of facecoverings.
- The fact that particles containing the virus can travel more than six feet, especially indoors, so physical distancing must be combined with other controls, including face coverings and hand hygiene, to be effective.
- The importance of frequent hand washing with soap and water for at least 20 seconds and using hand sanitizer when employees do not have immediate access to a sink or hand washing facility, and that hand sanitizer does not work if the hands are soiled.
- Proper use of face coverings and the fact that face coverings are not respiratory protective equipment - face coverings are intended to primarily protect other individuals from the wearer of the face covering.
- COVID-19 symptoms, and the importance of obtaining a COVID-19 test and not coming to work if the

COVID-19 Prevention Program (CPP)

employee has COVID-19 symptoms.

- Other aspects being implemented and/or prompt notifications of any changes.

A Safety Stand-Down/Toolbox Talk/Tailgate training must be conducted on all jobsites on the first day of returning to work, **and weekly thereafter**, to explain the COVID-19 risks/protective measures in place for all workers.

COVID -19 exposure precautions, along with safe social distancing project requirements, CDC guidelines shall be discussed at all morning safety briefings.

Below are the Balfour Beatty COVID-19 Orientation Videos

- English: https://www.youtube.com/watch?v=AbfBG_c3cc&t=17s
- Spanish: <https://www.youtube.com/watch?v=XloDJmWJtdQ>
- Download both versions: [CLICK HERE](#)

Office employees will receive training and communications via electronic means such as virtual meetings, recorded trainings, e-mail and/or electronic documents.

Physical Distancing

Site leadership shall develop a Site-Specific Infection Control Plan and evaluate all site work to determine the measures to best limit employees from being within 6 feet of each other, to follow all CDC guidelines and the measures stated in this document.

Subcontractors shall develop their own company / tasking Site-Specific Infection Control Plan and address their social distancing controls in their plans.

If possible, crew sizing shall be limited to groups of 5 or less when possible to manage social distancing.

Pre-task Plans (PTP's) for activities/tasks shall be used at least once daily to address and discuss work activities, hazards, **AND SHALL INCLUDE COVID-19 prevention measures** utilizing engineering controls and social distancing by each crew onsite, including subcontractors. Foreman and supervision shall record daily the activities / locations and contacts of craft workers. *Note: a modified PTP which includes COVID-19 protective measures is now available here:* <https://balfourbeattyus.sharepoint.com/sites/CaliSafety>

Sites shall not allow large gatherings for activities such as morning stretch and flex, safety meetings and site meetings.

- Stretch and Flex and Safety Meetings shall be held in smaller, crew size groups (5 or less) while maintaining safe social distancing (hosting outdoors is encouraged).
- Information for meetings will be provided electronically if possible.
- Discontinue the use of pass around clipboards/sign -sheets. Supervisors / foreman will be responsible to record in writing who is present at meetings.

Staff or other jobsite meetings shall be held electronically whenever safe social distancing cannot be met.

Office staff shall adhere to the phased Workplace Readiness Plan for instructions regarding a safe return to the offices.

Project staff on-site, including subcontractor staff, shall work from home or in shifts to the extent possible to minimize contact in project offices/trailer.

Project staff shall modify office layout to create separation of over 6' between workstations.

COVID-19 Prevention Program (CPP)

Lunchrooms and Break Rooms: Social distancing will be enforced by maintaining a 6-foot separation of individuals.

- Lunch / break times will be staggered as necessary to enforce social distancing
- Chairs / tables will be separated or visual indicators such as tape marking will be used to identify and enforce social distancing

Project staff shall identify “choke points” and “high-risk areas” on jobsites where workers typically congregate and implement controls so social distancing will be maintained.

Site teams shall implement controls to minimize interactions when picking up or delivering equipment or materials to ensure minimum six-foot separation. Driver shall remain in vehicles.

Manlifts / Elevators – projects with manlifts or elevators shall develop a plan to maintain the social distancing requirements while riding the manlift / elevator.

- Plans shall limit the number of employees using the lift / elevator or gathering around while waiting for a manlift / elevator to ensure social distancing is maintained.
- Manlift / elevators operators shall always be protected by a mask or other means and methods if possible, plexiglass etc.

Carpooling is discouraged and should be avoided, especially in company provided vehicles. If carpooling cannot be avoided, passengers, not of the same household, shall wear face coverings at all times. Additional measures such as proper ventilation (i.e. windows rolled down weather permitting), use of hand sanitizer and disinfecting after use should be taken.

If critical operations or tasking is required and all specified infection prevention measures, social distancing guidelines and work plans cannot be followed, a COVID-19 Risk Assessment and associated JHA and PTP must be completed and approved by the site BB Superintendent, Project Executive, Vice President, Safety Director, Safety Manager.

Personal Protective Equipment (PPE) used to control employee exposure to COVID-19

The use of face coverings shall be mandatory for all employees on all BB projects and at all BB offices.

BB will provide personal protective equipment (PPE) to Balfour Beatty employees such as gloves, goggles, face shields and cloth face coverings or mask as appropriate, or required, for the activity being performed.

Subcontractors shall be responsible for providing the appropriate PPE, including cloth face coverings to their employees on BB projects.

BB PPE policy will be strictly enforced.

Cleaning and Disinfecting

Office and Project Sites shall post supporting signage including the CDC signage - Stop the Spread of Germs guidelines at all trailers, lunchrooms, break rooms, handwashing stations and sanitation facilities.

Sites shall provide adequate handwashing stations and sanitation facilities to accommodate project size and needs.

- Employees shall be encouraged to leave their workstations to wash their hands regularly, before and after going to the bathroom, before / after eating and after coughing, sneezing or blowing their nose.
- Employees shall be encouraged to wash hands for a period of more than 20 seconds.
- Employees shall be encouraged to avoid touching their eyes, noses and mouths.
- Alcohol-based hand sanitizers with greater than 60% ethanol or 70% isopropanol can also be used but are not a replacement for the handwashing stations.

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Sites/offices shall provide sufficient trash receptacles and empty them as needed.

All personnel will clean and disinfect common hand tools and other equipment before and after use.

Site/office teams will develop a cleaning / disinfecting plan for project to include job site, lunchroom and break rooms, site offices and common areas.

- Individual employees shall be assigned to a cleaning / disinfecting team with the responsibility to regularly clean / disinfect common areas, handrails, door handles, lunch/break rooms, etc. as required by the project size and number of employee present.
- Lunchrooms and break rooms shall be cleaned and disinfected before and after use.
- Individual employees in site offices shall clean and disinfect their immediate work area frequently- at least daily.
- Common surfaces in site offices such as printers, door handles, etc. shall be cleaned and disinfected frequently- at least daily.
- Site teams will ensure portable rest rooms are cleaned on a regular basis (3 times per week).

BB will make disinfectants available to workers throughout the worksite and ensure cleaning supplies are frequently replenished.

Employee Health Symptoms & Responses

BB shall require employees to stay home if they are feeling sick or have been exposed to someone confirmed or suspected of having COVID-19.

Employees who do not believe it is safe to work shall be allowed to remove themselves from the jobsite/office. Site supervision shall immediately notify VP, SHE Director, and/or HR Director for direction.

Any worker coming to work on a construction site in California from any state that is not contiguous to California may be subject to self-quarantine to become eligible to work on a jobsite in California.

Please remember, all HIPAA provisions strictly apply.

Employee Temperature Screening:

Anyone entering BB jobsites/offices will undergo a touchless temperature screening.

- [BB Procedure for Jobsite Temperature Screening](#) shall be followed.
- Employees will also be asked to read and respond to the COVID-19 questionnaire.
- BB will verify that the employee has gone through the temperature check via a checklist.
- Anyone who refuses the temperature screening shall not be admitted to the site.
- For any employee who presents with a temperature at or above 100.4 degrees Fahrenheit or answers yes to any questions on the questionnaire, the guidelines stated below in **Next Steps with employees calling in sick / self-identifying or presenting a fever** shall be followed.

Employees shall inform their supervisors (self-identify) AND not report to work onsite if:

- They have been directed by a medical professional to get tested for COVID-19. Employees waiting for test results may not report to work until test results are received and no further quarantine period is required. *Note: individuals who elect to get a COVID-19 test (not at the direction of a medical professional) for their own assurance do not have to self-identify unless they fall into a category listed below or until such time as they get a positive result.*
- They have been in close contact with anyone that has:

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- Tested positive for COVID-19,
- Symptoms of COVID- 19, or
- Been tested for COVID- 19 and is waiting for results.
- If they are experiencing any of the below symptoms:
 - Fever or chills
 - Cough
 - Shortness of breath or difficulty breathing
 - Fatigue
 - Muscle or body aches
 - Headache
 - New loss of taste or smell
 - Sore throat
 - Congestion or runny nose
 - Nausea or vomiting
 - Diarrhea

- If they develop symptoms of COVID-19 (such as fever, cough, shortness of breath) at work. If symptoms develop during a shift, the worker should be immediately sent home.

If employees confirm any of the questions / situations above, refer to the **Next Steps with employees calling in sick / self-identifying or presenting a fever** below.

In the event of an employee calling in sick:

1. First determine why the employee is calling in sick.
 - Are they sick themselves, taking care of others, or just unsure of what to do?
 - Are the symptoms they have in-line with COVID-19?
 - Have they seen a medical provider? (for COVID-19 symptoms, employees should be encouraged to CONTACT a medical provider for guidance).
 - HAVE THEY BEEN TESTED FOR COVID-19?

Next Steps for Supervisors with employees calling in sick / self-identifying or presenting a fever:

For any of the following the Supervisor shall stay in regular contact with the employee to offer help. Notify site team management, VP, SHE Director, and HR Director.

- For any employee who presents with a screening temperature at or above 100.4 degrees Fahrenheit or answers yes to any questions on the questionnaire, they will not be admitted on site or into the office - encourage them to contact a medical provider and self-quarantine.
- If employee's symptoms are in-line with COVID-19, they will not be admitted on site or into the office - encourage them to contact a medical provider and self-quarantine.
- If an employee has been tested for COVID-19 or has had a positive test for COVID-19, they must be sent home / not allowed on site or into the office. They must self-quarantine and follow doctor's orders. Stay in regular contact with the employee to offer help and to determine their outcome and recovery.
- If an employee states they have had close contact (per CDC guidelines) with a person who has been positively identified by a medical provider as having COVID-19, they must be sent home / not allowed on site or into the office - encourage them to contact a medical provider and self-quarantine.
- If an employee develops symptoms that are in line with COVID-19 during the workday, send them home immediately and encourage them to see a medical provider.

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Note: Refer to the **Return-to-Work Criteria** section below or **Appendix A** to determine when employees may return to a work site.

Project/Office Actions:

When we are notified of any of the situations in step **Next Steps with employees calling in sick / self-identifying or presenting a fever**, projects/department heads shall call Human Resources (HR) immediately and implement the following:

1. Determine where the employee was working and what tools or equipment he/she was using.
 - After conversation with VP, SHE Director and/or Division President, Supervisor to setup a plan to disinfect affected areas per CDC guidelines. If needed, bring in an outside vendor to do the disinfecting.
2. HR to determine, only by asking the potentially exposed employee and their immediate supervisor, who the affected employee had “close contact” with over the past 2 days (before symptoms). **Close contact** is defined as someone who was within 6 feet of an infected person for a cumulative total of 15 minutes or more over a 24-hour period (regardless if face coverings were worn) starting from 2 days before illness onset (or, for asymptomatic patients, 2 days prior to test specimen collection) until the time the positive individual is isolated.
 - Discuss this with your VP and SHE Director prior to notifying other employees on project.
Note: This will be easier if we take increased steps now by having our foreman and supervision record the daily the activities / locations and contacts of our craft workers.

DOs and DO NOTs

DO:

- Increase measures to note daily the activities / locations and contacts of employees.
- Maintain a daily attendance log of all workers and visitors and retain for at least four weeks.
- Have this COVID-19 Prevention Plan available at all projects/offices.
- Instruct Subcontractors on project on these protocols and the requirement they comply with them.
- Control gate / project access to ensure non-screened individuals do not enter project.

DO NOT:

- Suspend work, send people home (unless ill as described above), or take other COVID-19 related actions unless approved by VP, SHE Director, HR Director or Division President.
- Demand or direct employee that we BB are requiring them to be tested. That is a determination made by a medical provider only.
- Do not discuss any employee’s medical status, or use their name with other employees, as they are protected under HIPAA.
- Do not allow rumors to run rampant, discuss only confirmed facts as disclosed by management.

If you have any questions concerning project protective guidelines or employee’s health guidelines, contact your VP, SHE Director, or HR Director.

Investigating and Responding to COVID-19 Cases

Project/office management and/or Human Resources will investigate reported COVID-19 cases within the workplace.

Employees who had potential COVID-19 exposure in our workplace will be:

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- Offered COVID-19 testing at no cost during their working hours. Employees insured by the company's health insurance are encouraged to utilize services under this benefit. If employees are not covered by insurance that provides testing at no cost an alternate solution will be determined by the company.
- Provided with information on COVID-19 related benefits such as the company's COVID-19 Temporary Paid Sick Leave Policy, state and/or federal benefits and return to work criteria.

System for Communicating

Our goal is to ensure that we have effective two-way communication with our employees. Please refer to the information below and refer any questions to the Human Resources department.

- Employees should immediately report COVID-19 symptoms or exposure to their supervisor and/or Human Resources.
- Employees should immediately report possible hazards to their supervisor, any member of the Safety, Health & Environmental department, Human Resources, and/or any Officer.
- Employees can report symptoms and hazards without fear of reprisal.
- Employees that have a request for an accommodation due to a medical or other condition that puts them at increased risk of severe COVID-19 illness should make the request to their supervisor and/or Human Resources. Employees may be asked to complete a reasonable accommodation request form.
- The company does not require COVID-19 testing. If an employee voluntarily chooses to be tested it is recommended to contact their medical provider. Employees may also refer to their local county for free testing. Most counties provide information for free testing on their website. If you need assistance finding a testing facility, please contact Human Resources.
- In the event we are required to provide testing because of a workplace exposure or outbreak, we will communicate the plan for providing testing and inform affected employees of the reason for the testing and the possible consequences of a positive test.
- We will provide prompt notification to employees or others identified as having "close contact" with a positive COVID-19 individual or a potential exposure situation on our worksite.
- Employees may obtain more information on the [COVID-19 Employee Resource Center](#).

Exclusion of COVID-19 Cases

Where we have a COVID-19 case in our workplace, we will limit transmission by:

- Ensuring that COVID-19 cases are excluded from the workplace until our return-to-work requirements are met.
- Excluding employees with COVID-19 exposure from the workplace for 14 days after the last known COVID-19 exposure to a COVID-19 case. *Note: Contact the HR Director if you have contracted and recovered from COVID-19 within the past three months of the date of re-exposure.*
- Continuing and maintaining an employee's earnings, seniority, and all other employee rights and benefits whenever we've demonstrated that the COVID-19 exposure is work related.
- Providing employees with information on available COVID-19 benefits.

Reporting, Recordkeeping, and Access

It is our policy to:

- Report information about COVID-19 cases at our workplace to the local health department whenever required by law, and provide any related information requested by the local health department.

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- Report immediately to Cal/OSHA any COVID-19-related serious illnesses or death, as defined under CCR Title 8 section 330(h), of an employee occurring in our place of employment or in connection with any employment.
- Maintain records of the steps taken to implement our written COVID-19 Prevention Program in accordance with CCR Title 8 section 3203(b).
- Make our written COVID-19 Prevention Program available at the workplace to employees, authorized employee representatives, and to representatives of Cal/OSHA immediately upon request.
- Keep a record of and track all COVID-19 cases within the workplace. The information will be made available to authorized individuals or as otherwise required by law, with personal identifying information removed.

Return-to-Work Criteria

- COVID-19 cases with COVID-19 symptoms will not return to work until all the following have occurred:
 - At least 24 hours have passed since a fever of 100.4 degrees Fahrenheit or higher has resolved without the use of fever-reducing medications.
 - Now symptom free.
 - At least 10 days have passed since COVID-19 symptoms first appeared.
- COVID-19 cases who tested positive but never developed COVID-19 symptoms will not return to work until a minimum of 10 days have passed since the date of specimen collection of their first positive COVID-19 test.
- A negative COVID-19 test will not be required for an employee to return to work.
- If an employee was exposed to a positive COVID-19 case, the employee will need to quarantine for 14 days from last exposure (or per the most current guidance issued by the CDC and/or state).
- If an order to isolate or quarantine an employee is issued by a local or state health official, the employee will not return to work until the period of isolation or quarantine is completed or the order is lifted. If no period was specified, then the period will be 10 days from the time the order to isolate was effective, or 14 days from the time the order to quarantine was effective.

*Refer to **Appendix A** for the COVID-19 Response Flow Chart.

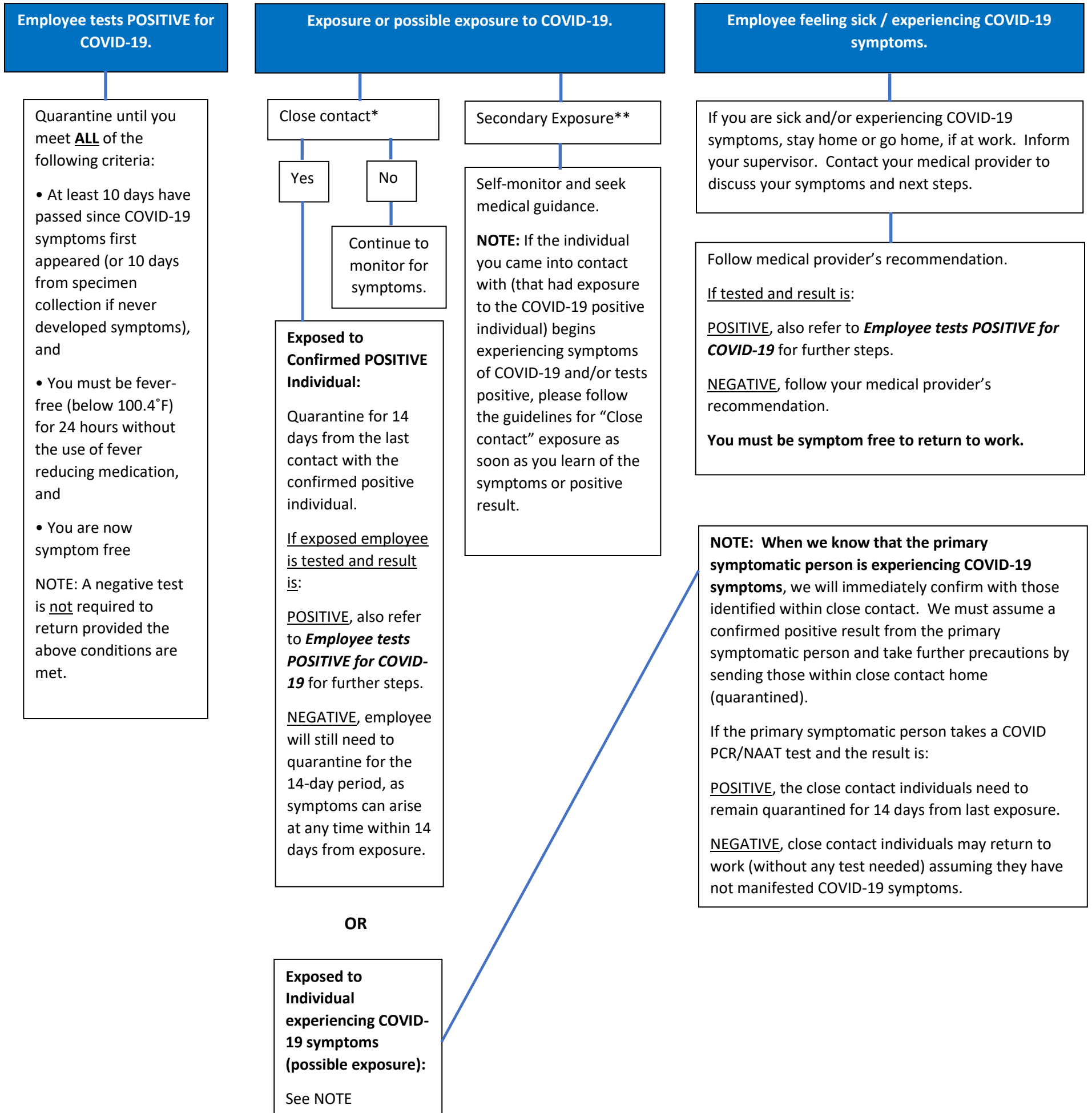
“This Program is a good faith effort to fully comply with the California Department of Industrial Relations Occupational Safety and Health Standards Board’s emergency temporary standard regarding COVID-19 which is attached hereto and incorporated herein. In the event that there is any conflict between this Program and the Cal/OSHA emergency temporary standard, the more stringent requirement shall apply and shall be deemed to be included in this Program.”

COVID-19 RESPONSE FLOW CHART

This is general guidance for Balfour Beatty employees based on current information available as of the date of this document. Internal company policy, CDC guidelines or other government agency emergency standards will govern in the event of any variance and the more stringent requirement shall apply.

EMPLOYEES: Immediately inform your supervisor (self-identify) if any of the following categories apply. Do not report to work onsite until further notice.

SUPERVISORS: The following will need to be notified immediately if an employee falls into any of the categories below: VP, HR Director and SH&E Director.



NOTE: Employees that meet any of the categories above will be contacted to determine if they had close contact with other individuals that may need to be notified and/or quarantined.

***Close contact:** CDC defines close contact as someone who was within 6 feet of an infected person for a cumulative total of 15 minutes or more over a 24-hour period (regardless if face coverings were worn) starting from 2 days before illness onset (or, for asymptomatic patients, 2 days prior to test specimen collection) until the time the positive individual is isolated.

****Secondary exposure:** Exposure risk via a secondary person (i.e. the secondary person had the direct exposure making the employee once removed from the confirmed COVID-19 person).

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Subchapter 7. General Industry Safety Orders

Adopt Section 3205 to read:

§ 3205. ~~“Shall” and “Should.”~~ [Repealed] COVID-19 Prevention.

(a) Scope.

(1) This section applies to all employees and places of employment, with the following exceptions:

(A) Places of employment with one employee who does not have contact with other persons.

(B) Employees working from home.

(C) Employees when covered by section 5199.

(2) Nothing in this section is intended to limit more protective or stringent state or local health department mandates or guidance.

(b) Definitions. The following definitions apply to this section and to sections 3205.1 through 3205.4.

(1) “COVID-19” means coronavirus disease, an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

(2) “COVID-19 case”

(A) Means a person who:

1. Has a positive “COVID-19 test” as defined in this section;

2. Is subject to a COVID-19-related order to isolate issued by a local or state health official; or

3. Has died due to COVID-19, in the determination of a local health department or per inclusion in the COVID-19 statistics of a county.

(B) A person is no longer a “COVID-19 case” in this section when a licensed health care professional determines that the person does not have COVID-19, in accordance with recommendations made by the California Department of Public Health (CDPH) or the local health department pursuant to authority granted under the Health and Safety Code or Title 17, California Code of Regulations to CDPH or the local health department.

(3) “COVID-19 exposure” means being within six feet of a COVID-19 case for a cumulative total of 15 minutes or greater in any 24-hour period within or overlapping with the “high-risk

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exposure period” defined by this section. This definition applies regardless of the use of face coverings.

(4) “COVID-19 hazard” means exposure to potentially infectious material that may contain SARS-CoV-2, the virus that causes COVID-19. Potentially infectious materials include airborne droplets, small particle aerosols, and airborne droplet nuclei, which most commonly result from a person or persons exhaling, talking or vocalizing, coughing, sneezing, or procedures performed on persons which may aerosolize saliva or respiratory tract fluids, among other things. This also includes objects or surfaces that may be contaminated with SARS-CoV-2.

(5) “COVID-19 symptoms” means fever of 100.4 degrees Fahrenheit or higher, chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, or diarrhea, unless a licensed health care professional determines the person’s symptoms were caused by a known condition other than COVID-19.

(6) “COVID-19 test” means a viral test for SARS-CoV-2 that is:

(A) Approved by the United States Food and Drug Administration (FDA) or has an Emergency Use Authorization from the FDA to diagnose current infection with the SARS-CoV-2 virus; and

(B) Administered in accordance with the FDA approval or the FDA Emergency Use Authorization as applicable.

(7) “Exposed workplace” means any work location, working area, or common area at work used or accessed by a COVID-19 case during the high-risk period, including bathrooms, walkways, hallways, aisles, break or eating areas, and waiting areas. The exposed workplace does not include buildings or facilities not entered by a COVID-19 case.

(A) Effective January 1, 2021, the “exposed workplace” also includes but is not limited to the “worksite” of the COVID-19 case as defined by Labor Code section 6409.6(d)(5).

(8) “Face covering” means a tightly woven fabric or non-woven material with no visible holes or openings, which covers the nose and mouth.

(9) “High-risk exposure period” means the following time period:

(A) For persons who develop COVID-19 symptoms: from two days before they first develop symptoms until 10 days after symptoms first appeared, and 24 hours have passed with no fever, without the use of fever-reducing medications, and symptoms have improved; or

(B) For persons who test positive who never develop COVID-19 symptoms: from two days before until ten days after the specimen for their first positive test for COVID-19 was collected.

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(c) Written COVID-19 Prevention Program. Employers shall establish, implement, and maintain an effective, written COVID-19 Prevention Program, which may be integrated into the employer's Injury and Illness Program required by section 3203, or be maintained in a separate document. The written elements of a COVID-19 Prevention Program shall include:

(1) System for communicating. The employer shall do all of the following in a form readily understandable by employees:

(A) Ask employees to report to the employer, without fear of reprisal, COVID-19 symptoms, possible COVID-19 exposures, and possible COVID-19 hazards at the workplace.

(B) Describe procedures or policies for accommodating employees with medical or other conditions that put them at increased risk of severe COVID-19 illness.

(C) Provide information about access to COVID-19 testing. If testing is required under this section, section 3205.1, or section 3205.2, the employer shall inform affected employees of the reason for the COVID-19 testing and the possible consequences of a positive test.

(D) In accordance with subsection (c)(3)(B)3., communicate information about COVID-19 hazards and the employer's COVID-19 policies and procedures to employees and to other employers, persons, and entities within or in contact with the employer's workplace.

NOTE: See subsections (c)(3)(C) and (c)(3)(D) for confidentiality requirements for COVID-19 cases.

(2) Identification and evaluation of COVID-19 hazards.

(A) The employer shall allow for employee and authorized employee representative participation in the identification and evaluation of COVID-19 hazards.

(B) The employer shall develop and implement a process for screening employees for and responding to employees with COVID-19 symptoms. The employer may ask employees to evaluate their own symptoms before reporting to work. If the employer conducts screening at the workplace, the employer shall ensure that face coverings are used during screening by both screeners and employees and, if temperatures are measured, that non-contact thermometers are used.

(C) The employer shall develop COVID-19 policies and procedures to respond effectively and immediately to individuals at the workplace who are a COVID-19 case to prevent or reduce the risk of transmission of COVID-19 in the workplace.

(D) The employer shall conduct a workplace-specific identification of all interactions, areas, activities, processes, equipment, and materials that could potentially expose

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employees to COVID-19 hazards. Employers shall treat all persons, regardless of symptoms or negative COVID-19 test results, as potentially infectious.

1. This shall include identification of places and times when people may congregate or come in contact with one another, regardless of whether employees are performing an assigned work task or not, for instance during meetings or trainings and including in and around entrances, bathrooms, hallways, aisles, walkways, elevators, break or eating areas, cool-down areas, and waiting areas.

2. This shall include an evaluation of employees' potential workplace exposure to all persons at the workplace or who may enter the workplace, including coworkers, employees of other entities, members of the public, customers or clients, and independent contractors. Employers shall consider how employees and other persons enter, leave, and travel through the workplace, in addition to addressing fixed work locations.

(E) For indoor locations, the employer shall evaluate how to maximize the quantity of outdoor air and whether it is possible to increase filtration efficiency to the highest level compatible with the existing ventilation system.

(F) The employer shall review applicable orders and guidance from the State of California and the local health department related to COVID-19 hazards and prevention, including information of general application and information specific to the employer's industry, location, and operations.

(G) The employer shall evaluate existing COVID-19 prevention controls at the workplace and the need for different or additional controls. This includes evaluation of controls in subsections (c)(4), and (c)(6) through (c)(8).

(H) The employer shall conduct periodic inspections as needed to identify unhealthy conditions, work practices, and work procedures related to COVID-19 and to ensure compliance with employers' COVID-19 policies and procedures.

(3) Investigating and responding to COVID-19 cases in the workplace.

(A) Employers shall have an effective procedure to investigate COVID-19 cases in the workplace. This includes procedures for verifying COVID-19 case status, receiving information regarding COVID-19 test results and onset of COVID-19 symptoms, and identifying and recording COVID-19 cases.

(B) The employer shall take the following actions when there has been a COVID-19 case at the place of employment:

1. Determine the day and time the COVID-19 case was last present and, to the extent possible, the date of the positive COVID-19 test(s) and/or diagnosis, and the date the

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COVID-19 case first had one or more COVID-19 symptoms, if any were experienced.

2. Determine who may have had a COVID-19 exposure. This requires an evaluation of the activities of the COVID-19 case and all locations at the workplace which may have been visited by the COVID-19 case during the high-risk exposure period.

Note: See subsection (c)(10) for exclusion requirements for employees with COVID-19 exposure.

3. Give notice of the potential COVID-19 exposure, within one business day, in a way that does not reveal any personal identifying information of the COVID-19 case, to the following:
- a. All employees who may have had COVID-19 exposure and their authorized representatives.
 - b. Independent contractors and other employers present at the workplace during the high-risk exposure period.
4. Offer COVID-19 testing at no cost to employees during their working hours to all employees who had potential COVID-19 exposure in the workplace and provide them with the information on benefits described in subsections (c)(5)(B) and (c)(10)(C).
5. Investigate whether any workplace conditions could have contributed to the risk of COVID-19 exposure and what could be done to reduce exposure to COVID-19 hazards.

(C) Personal identifying information of COVID-19 cases or persons with COVID-19 symptoms shall be kept confidential. All COVID-19 testing or related medical services provided by the employer under this section and sections 3205.1 through 3205.4 shall be provided in a manner that ensures the confidentiality of employees.

EXCEPTION to subsection (c)(3)(C): Unredacted information on COVID-19 cases shall be provided to the local health department, CDPH, the Division, the National Institute for Occupational Safety and Health (NIOSH), or as otherwise required by law immediately upon request.

(D) The employer shall ensure that all employee medical records required by this section and sections 3205.1 through 3205.4 are kept confidential and are not disclosed or

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reported without the employee's express written consent to any person within or outside the workplace.

EXCEPTION 1 to subsection (c)(3)(D): Unredacted medical records shall be provided to the local health department, CDPH, the Division, NIOSH, or as otherwise required by law immediately upon request.

EXCEPTION 2 to subsection (c)(3)(D): This provision does not apply to records that do not contain individually identifiable medical information or from which individually identifiable medical information has been removed.

- (4) Correction of COVID-19 hazards. Employers shall implement effective policies and/or procedures for correcting unsafe or unhealthy conditions, work practices, policies and procedures in a timely manner based on the severity of the hazard. This includes, but is not limited to, implementing controls and/or policies and procedures in response to the evaluations conducted under subsections (c)(2) and (c)(3) and implementing the controls required by subsection (c)(6) through (c)(8).
- (5) Training and instruction. The employer shall provide effective training and instruction to employees that includes the following:
- (A) The employer's COVID-19 policies and procedures to protect employees from COVID-19 hazards.
 - (B) Information regarding COVID-19-related benefits to which the employee may be entitled under applicable federal, state, or local laws. This includes any benefits available under workers' compensation law, the federal Families First Coronavirus Response Act, Labor Code sections 248.1 and 248.5, Labor Code sections 3212.86 through 3212.88, local governmental requirements, the employer's own leave policies, and leave guaranteed by contract.
 - (C) The fact that COVID-19 is an infectious disease that can be spread through the air when an infectious person talks or vocalizes, sneezes, coughs, or exhales; that COVID-19 may be transmitted when a person touches a contaminated object and then touches their eyes, nose, or mouth, although that is less common; and that an infectious person may have no symptoms.
 - (D) Methods of physical distancing of at least six feet and the importance of combining physical distancing with the wearing of face coverings.
 - (E) The fact that particles containing the virus can travel more than six feet, especially indoors, so physical distancing must be combined with other controls, including face coverings and hand hygiene, to be effective.

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- (F) The importance of frequent hand washing with soap and water for at least 20 seconds and using hand sanitizer when employees do not have immediate access to a sink or hand washing facility, and that hand sanitizer does not work if the hands are soiled.
- (G) Proper use of face coverings and the fact that face coverings are not respiratory protective equipment.
- (H) COVID-19 symptoms, and the importance of not coming to work and obtaining a COVID-19 test if the employee has COVID-19 symptoms.
- (6) Physical distancing.
- (A) All employees shall be separated from other persons by at least six feet, except where an employer can demonstrate that six feet of separation is not possible, and except for momentary exposure while persons are in movement. Methods of physical distancing include: telework or other remote work arrangements; reducing the number of persons in an area at one time, including visitors; visual cues such as signs and floor markings to indicate where employees and others should be located or their direction and path of travel; staggered arrival, departure, work, and break times; and adjusted work processes or procedures, such as reducing production speed, to allow greater distance between employees.
- (B) When it is not possible to maintain a distance of at least six feet, individuals shall be as far apart as possible.
- (7) Face coverings.
- (A) Employers shall provide face coverings and ensure they are worn by employees over the nose and mouth when indoors, when outdoors and less than six feet away from another person, and where required by orders from the CDPH or local health department. Employers shall ensure face coverings are clean and undamaged. Face shields are not a replacement for face coverings, although they may be worn together for additional protection. The following are exceptions to the face coverings requirement:
1. When an employee is alone in a room.
 2. While eating and drinking at the workplace, provided employees are at least six feet apart and outside air supply to the area, if indoors, has been maximized to the extent possible.
 3. Employees wearing respiratory protection in accordance with section 5144 or other title 8 safety orders.
 4. Employees who cannot wear face coverings due to a medical or mental health condition or disability, or who are hearing-impaired or communicating with a hearing-impaired person.

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5. Specific tasks which cannot feasibly be performed with a face covering. This exception is limited to the time period in which such tasks are actually being performed, and the unmasked employee shall be at least six feet away from all other persons unless unmasked employees are tested at least twice weekly for COVID-19.

NOTE: CDPH has issued guidance for employers that identifies examples when wearing a face covering is likely not feasible.

(B) Employees exempted from wearing face coverings due to a medical condition, mental health condition, or disability shall wear an effective non-restrictive alternative, such as a face shield with a drape on the bottom, if their condition or disability permits it.

(C) Any employee not wearing a face covering, face shield with a drape or other effective alternative, or respiratory protection, for any reason, shall be at least six feet apart from all other persons unless the unmasked employee is tested at least twice weekly for COVID-19. Employers may not use COVID-19 testing as an alternative to face coverings when face coverings are otherwise required by this section.

(D) No employer shall prevent any employee from wearing a face covering when not required by this section, unless it would create a safety hazard, such as interfering with the safe operation of equipment.

(E) Employers shall implement measures to communicate to non-employees the face coverings requirements on their premises.

(F) The employer shall develop COVID-19 policies and procedures to minimize employee exposure to COVID-19 hazards originating from any person not wearing a face covering, including a member of the public.

(8) Other engineering controls, administrative controls, and personal protective equipment.

(A) At fixed work locations where it is not possible to maintain the physical distancing requirement at all times, the employer shall install cleanable solid partitions that effectively reduce aerosol transmission between the employee and other persons.

(B) For buildings with mechanical or natural ventilation, or both, employers shall maximize the quantity of outside air provided to the extent feasible, except when the United States Environmental Protection Agency (EPA) Air Quality Index is greater than 100 for any pollutant or if opening windows or letting in outdoor air by other means would cause a hazard to employees, for instance from excessive heat or cold.

(C) Employers shall implement cleaning and disinfecting procedures, which require:

1. Identifying and regularly cleaning and disinfecting frequently touched surfaces and objects, such as doorknobs, elevator buttons, equipment, tools, handrails, handles, controls, bathroom surfaces, and steering wheels. The employer shall inform

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employees and authorized employee representatives of cleaning and disinfection protocols, including the planned frequency and scope of regular cleaning and disinfection.

2. Prohibiting the sharing of personal protective equipment and to the extent feasible, items that employees come in regular physical contact with such as phones, headsets, desks, keyboards, writing materials, instruments, and tools. When it is not feasible to prevent sharing, sharing shall be minimized and such items and equipment shall be disinfected between uses by different people. Sharing of vehicles shall be minimized to the extent feasible, and high touch points (steering wheel, door handles, seatbelt buckles, armrests, shifter, etc.) shall be disinfected between users.
3. Cleaning and disinfection of areas, material, and equipment used by a COVID-19 case during the high-risk exposure period.

NOTE: Cleaning and disinfecting must be done in a manner that does not create a hazard to employees. See Group 2 and Group 16 of the General Industry Safety Orders for further information.

(D) To protect employees from COVID-19 hazards, the employer shall evaluate its handwashing facilities, determine the need for additional facilities, encourage and allow time for employee handwashing, and provide employees with an effective hand sanitizer. Employers shall encourage employees to wash their hands for at least 20 seconds each time. Provision or use of hand sanitizers with methyl alcohol is prohibited.

(E) Personal protective equipment.

1. Employers shall evaluate the need for personal protective equipment to prevent exposure to COVID-19 hazards, such as gloves, goggles, and face shields, and provide such personal protective equipment as needed.
2. Employers shall evaluate the need for respiratory protection in accordance with section 5144 when the physical distancing requirements in subsection (c)(6) are not feasible or are not maintained.
3. Employers shall provide and ensure use of respirators in accordance with section 5144 when deemed necessary by the Division through the Issuance of Order to Take Special Action, in accordance with title 8, section 332.3.
4. Employers shall provide and ensure use of eye protection and respiratory protection in accordance with section 5144 when employees are exposed to procedures that

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may aerosolize potentially infectious material such as saliva or respiratory tract fluids.

NOTE: Examples of work covered by subsection (c)(8)(E)4. include, but are not limited to, certain dental procedures and outpatient medical specialties not covered by section 5199.

(9) Reporting, recordkeeping, and access.

(A) The employer shall report information about COVID-19 cases at the workplace to the local health department whenever required by law, and shall provide any related information requested by the local health department.

(B) The employer shall report immediately to the Division any COVID-19-related serious illnesses or death, as defined under section 330(h), of an employee occurring in a place of employment or in connection with any employment.

(C) The employer shall maintain records of the steps taken to implement the written COVID-19 Prevention Program in accordance with section 3203(b).

(D) The written COVID-19 Prevention Program shall be made available at the workplace to employees, authorized employee representatives, and to representatives of the Division immediately upon request.

(E) The employer shall keep a record of and track all COVID-19 cases with the employee's name, contact information, occupation, location where the employee worked, the date of the last day at the workplace, and the date of a positive COVID-19 test. Medical information shall be kept confidential in accordance with subsections (c)(3)(C) and (c)(3)(D). The information shall be made available to employees, authorized employee representatives, or as otherwise required by law, with personal identifying information removed.

Note: Subsection (c)(9)(E) does not alter the right of employees or their representatives to request and obtain an employer's Log of Work-Related Injuries and Illnesses (Log 300), without redaction, or to request and obtain information as otherwise allowed by law.

(10) Exclusion of COVID-19 cases. The purpose of this subsection is to limit transmission of COVID-19 in the workplace.

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(A) Employers shall ensure that COVID-19 cases are excluded from the workplace until the return to work requirements of subsection (c)(11) are met.

(B) Employers shall exclude employees with COVID-19 exposure from the workplace for 14 days after the last known COVID-19 exposure to a COVID-19 case.

(C) For employees excluded from work under subsection (c)(10) and otherwise able and available to work, employers shall continue and maintain an employee's earnings, seniority, and all other employee rights and benefits, including the employee's right to their former job status, as if the employee had not been removed from their job. Employers may use employer-provided employee sick leave benefits for this purpose and consider benefit payments from public sources in determining how to maintain earnings, rights and benefits, where permitted by law and when not covered by workers' compensation.

EXCEPTION 1: Subsection (c)(10)(C) does not apply to any period of time during which the employee is unable to work for reasons other than protecting persons at the workplace from possible COVID-19 transmission.

EXCEPTION 2: Subsection (c)(10)(C) does not apply where the employer demonstrates that the COVID-19 exposure is not work related.

(D) Subsection (c)(10) does not limit any other applicable law, employer policy, or collective bargaining agreement that provides for greater protections.

(E) At the time of exclusion, the employer shall provide the employee the information on benefits described in subsections (c)(5)(B) and (c)(10)(C).

EXCEPTION to subsection (c)(10): Employees who have not been excluded or isolated by the local health department need not be excluded by the employer, if they are temporarily reassigned to work where they do not have contact with other persons until the return to work requirements of subsection (c)(11) are met.

(11) Return to work criteria.

(A) COVID-19 cases with COVID-19 symptoms shall not return to work until:

1. At least 24 hours have passed since a fever of 100.4 or higher has resolved without the use of fever-reducing medications;
2. COVID-19 symptoms have improved; and
3. At least 10 days have passed since COVID-19 symptoms first appeared.

(B) COVID-19 cases who tested positive but never developed COVID-19 symptoms shall not return to work until a minimum of 10 days have passed since the date of specimen collection of their first positive COVID-19 test.

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(C) A negative COVID-19 test shall not be required for an employee to return to work.

(D) If an order to isolate or quarantine an employee is issued by a local or state health official, the employee shall not return to work until the period of isolation or quarantine is completed or the order is lifted. If no period was specified, then the period shall be 10 days from the time the order to isolate was effective, or 14 days from the time the order to quarantine was effective.

(E) If there are no violations of local or state health officer orders for isolation or quarantine, the Division may, upon request, allow employees to return to work on the basis that the removal of an employee would create undue risk to a community's health and safety. In such cases, the employer shall develop, implement, and maintain effective control measures to prevent transmission in the workplace including providing isolation for the employee at the workplace and, if isolation is not possible, the use of respiratory protection in the workplace.

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

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Add new section 3205.1 to read:

§ 3205.1. Multiple COVID-19 Infections and COVID-19 Outbreaks.

(a) Scope.

(1) This section applies to a place of employment covered by section 3205 if it has been identified by a local health department as the location of a COVID-19 outbreak or when there are three or more COVID-19 cases in an exposed workplace within a 14-day period.

(2) This section shall apply until there are no new COVID-19 cases detected in a workplace for a 14-day period.

(b) COVID-19 testing.

(1) The employer shall provide COVID-19 testing to all employees at the exposed workplace except for employees who were not present during the period of an outbreak identified by a local health department or the relevant 14-day period(s) under subsection (a), as applicable. COVID-19 testing shall be provided at no cost to employees during employees' working hours.

(2) COVID-19 testing shall consist of the following:

(A) Immediately upon being covered by this section, all employees in the exposed workplace shall be tested and then tested again one week later. Negative COVID-19 test results of employees with COVID-19 exposure shall not impact the duration of any quarantine period required by, or orders issued by, the local health department.

(B) After the first two COVID-19 tests required by subsection (b)(2)(A), employers shall provide continuous COVID-19 testing of employees who remain at the workplace at least once per week, or more frequently if recommended by the local health department, until this section no longer applies pursuant to subsection (a)(2).

(C) Employers shall provide additional testing when deemed necessary by the Division through the Issuance of Order to Take Special Action, in accordance with title 8, section 332.3.

(c) Exclusion of COVID-19 cases. Employers shall ensure COVID-19 cases and employees who had COVID-19 exposure are excluded from the workplace in accordance with subsections 3205(c)(10) and (c)(11) and local health officer orders if applicable.

(d) Investigation of workplace COVID-19 illness. The employer shall immediately investigate and determine possible workplace related factors that contributed to the COVID-19 outbreak in accordance with subsection 3205(c)(3).

(e) COVID-19 Investigation, review and hazard correction. In addition to the requirements of subsection 3205(c)(2) and 3205(c)(4), the employer shall immediately perform a review of

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potentially relevant COVID-19 policies, procedures, and controls and implement changes as needed to prevent further spread of COVID-19. The investigation and review shall be documented and include:

- (1) Investigation of new or unabated COVID-19 hazards including the employer's leave policies and practices and whether employees are discouraged from remaining home when sick; the employer's COVID-19 testing policies; insufficient outdoor air; insufficient air filtration; and lack of physical distancing.
- (2) The review shall be updated every thirty days that the outbreak continues, in response to new information or to new or previously unrecognized COVID-19 hazards, or when otherwise necessary.
- (3) The employer shall implement changes to reduce the transmission of COVID-19 based on the investigation and review required by subsections (e)(1) and (e)(2). The employer shall consider moving indoor tasks outdoors or having them performed remotely, increasing outdoor air supply when work is done indoors, improving air filtration, increasing physical distancing as much as possible, respiratory protection, and other applicable controls.

(f) Notifications to the local health department.

- (1) The employer shall contact the local health department immediately but no longer than 48 hours after the employer knows, or with diligent inquiry would have known, of three or more COVID-19 cases for guidance on preventing the further spread of COVID-19 within the workplace.
- (2) The employer shall provide to the local health department the total number of COVID-19 cases and for each COVID-19 case, the name, contact information, occupation, workplace location, business address, the hospitalization and/or fatality status, and North American Industry Classification System code of the workplace of the COVID-19 case, and any other information requested by the local health department. The employer shall continue to give notice to the local health department of any subsequent COVID-19 cases at the workplace.
- (3) Effective January 1, 2021, the employer shall provide all information to the local health department required by Labor Code section 6409.6.

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

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Add new section 3205.2 to read:

§ 3205.2. Major COVID-19 Outbreaks.

(a) Scope.

(1) This section applies to any place of employment covered by section 3205 when there are 20 or more COVID-19 cases in an exposed workplace within a 30-day period.

(2) This section shall apply until there are no new COVID-19 cases detected in a workplace for a 14-day period.

(b) COVID-19 testing. Employers shall provide twice a week COVID-19 testing, or more frequently if recommended by the local health department, to all employees present at the exposed workplace during the relevant 30-day period(s) and who remain at the workplace. COVID-19 testing shall be provided at no cost to employees during employees' working hours.

(c) Exclusion of COVID-19 cases. Employers shall ensure COVID-19 cases and employees with COVID-19 exposure are excluded from the workplace in accordance with subsections 3205(c)(10) and (c)(11) and any relevant local health department orders.

(d) Investigation of workplace COVID-19 illnesses. The employer shall comply with the requirements of subsection 3205(c)(3).

(e) COVID-19 hazard correction. In addition to the requirements of subsection 3205(c)(4), the employer shall take the following actions:

(1) In buildings or structures with mechanical ventilation, employers shall filter recirculated air with Minimum Efficiency Reporting Value (MERV) 13 or higher efficiency filters if compatible with the ventilation system. If MERV-13 or higher filters are not compatible with the ventilation system, employers shall use filters with the highest compatible filtering efficiency. Employers shall also evaluate whether portable or mounted High Efficiency Particulate Air (HEPA) filtration units, or other air cleaning systems would reduce the risk of transmission and shall implement their use to the degree feasible.

(2) The employer shall determine the need for a respiratory protection program or changes to an existing respiratory protection program under section 5144 to address COVID-19 hazards.

(3) The employer shall evaluate whether to halt some or all operations at the workplace until COVID-19 hazards have been corrected.

(4) Any other control measures deemed necessary by the Division through the Issuance of Order to Take Special Action, in accordance with title 8 section 332.3.

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(f) Notifications to the local health department. Employers shall comply with the requirements of section 3205.1(f).

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

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Add new section 3205.3 to read:

§ 3205.3. COVID-19 Prevention in Employer-Provided Housing.

(a) Scope. This section applies to employer-provided housing. Employer-provided housing is any place or area of land, any portion of any housing accommodation, or property upon which a housing accommodation is located, consisting of: living quarters, dwelling, boardinghouse, tent, bunkhouse, maintenance-of-way car, mobile home, manufactured home, recreational vehicle, travel trailer, or other housing accommodations. Employer-provided housing includes a “labor camp” as that term is used in title 8 of the California Code of Regulations or other regulations or codes. The employer-provided housing may be maintained in one or more buildings or one or more sites, including hotels and motels, and the premises upon which they are situated, or the area set aside and provided for parking of mobile homes or camping. Employer-provided housing is housing that is arranged for or provided by an employer, other person, or entity to workers, and in some cases to workers and persons in their households, in connection with the workers’ employment, whether or not rent or fees are paid or collected.

The following exceptions apply:

(1) This section does not apply to housing provided for the purpose of emergency response, including firefighting, rescue, and evacuation, and support activities directly aiding response such as utilities, communications, and medical operations, if:

(A) The employer is a government entity; or

(B) The housing is provided temporarily by a private employer and is necessary to conduct the emergency response operations.

(2) Subsections (c), (d), (e), (f), and (h) do not apply to occupants who maintained a household together prior to residing in employer-provided housing, such as family members, when no other persons outside the household are present.

(b) Assignment of housing units. Employers shall ensure that shared housing unit assignments are prioritized in the following order:

(1) Residents who usually maintain a household together outside of work, such as family members, shall be housed in the same housing unit without other persons.

(2) Residents who work in the same crew or work together at the same worksite shall be housed in the same housing unit without other persons.

(3) Employees who do not usually maintain a common household, work crew, or worksite shall be housed in the same housing unit only when no other housing alternatives are possible.

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(c) Physical distancing and controls. Employers shall:

(1) Ensure the premises are of sufficient size and layout to permit at least six feet of physical distancing between residents in housing units, common areas, and other areas of the premises.

(2) Ensure beds are spaced at least six feet apart in all directions and positioned to maximize the distance between sleepers' heads. For beds positioned next to each other, i.e. side by side, the beds shall be arranged so that the head of one bed is next to the foot of the next bed. For beds positioned across from each other, i.e. end to end, the beds shall be arranged so that the foot of one bed is closest to the foot of the next bed. Bunk beds shall not be used.

(3) In housing units, maximize the quantity and supply of outdoor air and increase filtration efficiency to the highest level compatible with the existing ventilation system.

(d) Face coverings. Employers shall provide face coverings to all residents and provide information to residents on when they should be used in accordance with state or local health officer orders or guidance.

(e) Cleaning and disinfecting.

(1) Employers shall ensure that housing units, kitchens, bathrooms, and common areas are effectively cleaned and disinfected at least once a day to prevent the spread of COVID-19. Cleaning and disinfecting shall be done in a manner that protects the privacy of residents.

(2) Employers shall ensure that unwashed dishes, drinking glasses, cups, eating utensils, and similar items are not shared.

(f) Screening. The employer shall encourage residents to report COVID-19 symptoms to the employer.

(g) COVID-19 testing. The employer shall establish, implement, and maintain effective policies and procedures for COVID-19 testing of occupants who had a COVID-19 exposure, who have COVID-19 symptoms, or as recommended by the local health department.

(h) Isolation of COVID-19 cases and persons with COVID-19 exposure.

(1) Employers shall effectively isolate COVID-19 exposed residents from all other occupants. Effective isolation shall include providing COVID-19 exposed residents with a private bathroom, sleeping area, and cooking and eating facility.

(2) Employers shall effectively isolate COVID-19 cases from all occupants who are not COVID-19 cases. Effective isolation shall include housing COVID-19 cases only with other COVID-19 cases, and providing COVID-19 case occupants with a sleeping area.

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bathroom, and cooking and eating facility that is not shared by non-COVID-19 case occupants.

- (3) Personal identifying information regarding COVID-19 cases and persons with COVID-19 symptoms shall be kept confidential in accordance with subsections 3205(c)(3)(C) and 3205(c)(3)(D).
- (4) Employers shall end isolation in accordance with subsections 3205(c)(10) and (c)(11) and any applicable local or state health officer orders.

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.

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Add new section 3205.4 to read:

§ 3205.4. COVID-19 Prevention in Employer-Provided Transportation to and from Work.

- (a) Scope. This section applies to employer-provided motor vehicle transportation to and from work, which is any transportation of an employee, during the course and scope of employment, provided, arranged for, or secured by an employer including ride-share vans or shuttle vehicles, car-pools, and private charter buses, regardless of the travel distance or duration involved. Subsections (b) through (g) apply to employer-provided transportation. The following exceptions apply:
- (1) This section does not apply if the driver and all passengers are from the same household outside of work, such as family members.
 - (2) This section does not apply to employer-provided transportation when necessary for emergency response, including firefighting, rescue, and evacuation, and support activities directly aiding response such as utilities, communications, and medical operations.
- (b) Assignment of transportation. Employers shall prioritize shared transportation assignments in the following order:
- (1) Employees residing in the same housing unit shall be transported in the same vehicle.
 - (2) Employees working in the same crew or worksite shall be transported in the same vehicle.
 - (3) Employees who do not share the same household, work crew or worksite shall be transported in the same vehicle only when no other transportation alternatives are possible.
- (c) Physical distancing and face coverings. Employers shall ensure that:
- (1) Physical distancing and face covering requirements of subsection 3205(c)(6) and (c)(7) are followed for employees waiting for transportation.
 - (2) The vehicle operator and any passengers are separated by at least three feet in all directions during the operation of the vehicle, regardless of the vehicle's normal capacity.
 - (3) The vehicle operator and any passengers are provided with and wear a face covering in the vehicle as required by subsection 3205(c)(7).
- (d) Screening. Employers shall develop, implement, and maintain effective procedures for screening and excluding drivers and riders with COVID-19 symptoms prior to boarding shared transportation.
- (e) Cleaning and disinfecting. Employers shall ensure that:

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- (1) All high-contact surfaces (door handles, seatbelt buckles, armrests, etc.) used by passengers are cleaned and disinfected before each trip.
- (2) All high-contact surfaces used by drivers, such as the steering wheel, armrests, seatbelt buckles, door handles and shifter, shall be cleaned and disinfected between different drivers.
- (3) Employers shall provide sanitizing materials and ensure they are kept in adequate supply.
- (f) Ventilation. Employers shall ensure that vehicle windows are kept open, and the ventilation system set to maximize outdoor air and not set to recirculate air. Windows do not have to be kept open if one or more of the following conditions exist:
 - (1) The vehicle has functioning air conditioning in use and the outside temperature is greater than 90 degrees Fahrenheit.
 - (2) The vehicle has functioning heating in use and the outside temperature is less than 60 degrees Fahrenheit.
 - (3) Protection is needed from weather conditions, such as rain or snow.
 - (4) The vehicle has a cabin air filter in use and the U.S. EPA Air Quality Index for any pollutant is greater than 100.
- (g) Hand hygiene. Employers shall provide hand sanitizer in each vehicle and ensure that all drivers and riders sanitize their hands before entering and exiting the vehicle. Hand sanitizers with methyl alcohol are prohibited.

Note: Authority cited: Section 142.3, Labor Code. Reference: Sections 142.3 and 144.6, Labor Code.