

## SECTION 00 73 19

## HEALTH AND SAFETY REQUIREMENTS

## INTRODUCTION

This Section sets forth general health and safety requirements for the Contract.

Contractor shall be solely and fully responsible for compliance with all laws, rules and regulations applicable to health and safety of persons during the performance of the Work, and shall fully assume the defense of, indemnify, and hold harmless those entities and persons identified in Sections 00 72 00 and 00 73 16. Contractor shall be solely and fully responsible for all construction means, methods, techniques, sequences, and procedures, including all safety precautions and programs taken in connection with the Work, as well as coordinating all portions of the Work. Contractor, not the City, is responsible and liable for the health and safety of Contractor's employees and Subcontractors as set forth in applicable statutes, laws, and regulations. Contractor shall be solely responsible for any and all fines, penalties or damages which result from its failure to so comply.

The health and safety requirements specified in this Section are not all-inclusive. In addition, some of the requirements specified may not apply to the specific Work of this Contract. It is Contractor's sole responsibility to identify and comply with all applicable health and safety requirements for the Work. The City will neither assume administration nor direct control and responsibility for maintaining Contractor's health and safety program.

Nothing contained in this Section shall relieve Contractor, or any Subcontractor or Supplier, from the obligations set forth above and obligations as required by applicable laws, rules, or regulations. If a provision of this Section conflicts with any applicable provision of this Contract or any federal, state, or local safety regulations, the more stringent requirements that maintain a greater level of safety shall apply. Section includes:

- 1.0 Related Documents
- 2.0 Submittals
- 3.0 References
- 4.0 Definitions
- 5.0 General Health and Safety Requirements
- 6.0 Staff Organization
- 7.0 Controlled Substance Abuse and Alcohol
- 8.0 Training
- 9.0 Meetings
- 10.0 Project Activity Hazard Analysis/Job Hazard Analysis Program
- 11.0 Site-Specific Contractor Health & Safety Plan (HASP)
- 12.0 Inspections
- 13.0 Incident Reporting and Investigation
- 14.0 Personal Protective Equipment (PPE)
- 15.0 Emergency Equipment
- 16.0 Logs, Reports, and Recordkeeping
- 17.0 Remedial Action

## 1.0 RELATED DOCUMENTS

Documents related to the health and safety requirements set forth in this Section include, but are not necessarily limited to the following:

- A. Contractor Health and Safety Plan (HASP) Template
- B. Section 00 72 00 (General Conditions)

## 2.0 SUBMITTALS

This Article summarizes required safety-related Submittals. This Article is not intended to be all-inclusive. In addition, some Submittal requirements specified below may not apply depending on the specific Work under this Contract. Contractor is solely responsible for identifying and submitting to the City and appropriate authorities having jurisdiction all Submittals required by applicable laws, rules, and regulations.

- A. Site-Specific Contractor Health and Safety Plan (HASP) – Submitted to the City Representative 10 working days prior to commencement of Site work activities.
- B. Resume for the Site Safety Representative (SSR)
- C. Activity Hazard Analysis (AHA) or Job Hazard Analysis (JHA) shall be completed in conformance with OSHA standards and must be submitted with the HASP for all known activities which may pose known hazards or risks. During the course of the project, the Contractor is to utilize the AHA/JHA template for all significant activities and tasks with a high-risk potential, describing the job steps, key equipment to be used, hazards associated with each job step, and the controls used to remove or minimize the associated hazards – Submit to the City Representative on request (if applicable).
- D. Project Specific Contractor Hazardous Communications Plan – Submitted to the City Representative 10 working days prior to commencement of Site work activities
- E. Air Monitoring Results/Reports – Submitted to the City Representative on request (if applicable)
- F. Monthly Field Project Report – Including man-hours, incident/injury and property damage reports – Submitted to the City Representative on a monthly basis within 5 days of the last working day of the month
- G. Heavy Equipment Inspection Forms – Submitted to the City Representative on request (if applicable).
- H. Detailed three-week Look-Ahead Schedule addressing specific scheduled activities, the associated hazards and their mitigation shall be addressed in the AHA's previously submitted. The look ahead schedule shall be reviewed to ensure applicable AHA's are in place for the upcoming work – The schedule should be submitted to the City Representative on request (if applicable)
- I. Incident Investigation Reports – Submitted to the City Representative within 24 hours of the project incident
- J. HASP modification requests, and approved modifications to the appended HASP – Submitted to the City Representative for review (if applicable)
- K. Documentation for all individuals applicable to Regulatory Medical Surveillance guidelines and HAZWOPER training per Cal/OSHA requirements – Submitted to the City Representative for review prior to beginning any work associated with these requirements (if applicable)

- L. Critical Lift Plans – Submitted to the City Representative a minimum of three work days in advance of work to allow for review (if applicable)
- M. Crane Inspection Certifications – Submitted to the City Representative a minimum of three work days prior to the start of work (if applicable)
- N. Crane Operators certification – Submitted to the City Representative on request (if applicable)
- O. Applicable employee training and required medical approval documentation in compliance with Cal/OSHA standards
- P. Copies of detailed and documented annual and Quad crane inspections conducted by qualified individuals
- Q. Written crane inspections to City Representative on a daily basis
- R. A final report submitted within 20 working days following completion of the on-site work and prior to final acceptance by the City. The following minimum information shall be included in the final report:
  - 1. Summary of the overall performance of safety and health (accidents or incidents including near misses, unusual events, lessons learned, etc.)
  - 2. Final decontamination documentation including procedures and techniques used to decontaminate equipment, vehicles, and on-site facilities.
  - 3. Complete summary of personnel monitoring
  - 4. Complete summary of air monitoring accomplished during the project (if applicable)
- S. Arc Flash Risk Analysis – Submitted to the City 10 working days prior to performing electrical work on equipment/panels 240 volts or above. For any and all work on energized lines/equipment, Contractor shall also submit the qualifications of the Electricians performing such work to the City Representative upon request. For any system that the Contractor does not believe meets this threshold, the Contractor should submit a justification which includes but is not limited to Hazard Risk Category of the equipment in question, the results of the Shock Risk Assessment, and Arc Flash Assessment
- T. Energized Electrical Work Permit – Contractor shall submit an Energized Electrical Work Permit, which is attached to this Section as **Exhibit A**, 72 hours prior to performing energized electrical work. The permit submitted shall cover only the work detailed in the permit. Should the location or work change, a new Energized Electrical Work Permit will be required.
- U. Electrical Safety Program – Submitted to the City Representative on request (if applicable)
- V. Excavation Plan – For all excavation work below five feet, where a California Dig Permit is required to be held by the Contractor, an excavation plan shall be submitted. The plan shall define work approach, methods and mitigations in place to ensure for safe entry and delineation of open trenches /excavations. For excavations deeper than 20 feet, the plan shall be stamped and signed by a California-registered Professional Engineer (Civil/Structural) as required by Cal/OSHA.

### 3.0 REFERENCES

Work performed shall be consistent with the following guidelines and references and in compliance with all applicable regulations and standards, including those listed below. In the case that these requirements are conflicting, the one which offers the greatest level of safety shall be followed.

- A. Cal/OSHA Occupational Safety and Health Administration (OSHA) Regulations
  - 1. CCR Title 8 Standards (All)
  - 2. CCR Title 8 Tunnel Safety Orders (8400-8568)
- B. National Institute for Occupational Safety and Health (NIOSH) Publications
- C. U.S. Environmental Protection Agency (USEPA) Publications
- D. American Conference of Governmental Industrial Hygienists (ACGIH) Publications
- E. NFPA 70E 2018 Edition – Standard for Electrical Safety in the Workplace
- F. ANSI/NFPA 70 – National Electrical Code
- G. InterNational Electrical Testing Association – NETA ATS latest Edition: Acceptance Testing Specifications, and/or NETA MTS latest Edition: Maintenance Testing Specifications.

#### 4.0 DEFINITIONS

- A. Activity Hazard Analysis (AHA)/Job Hazard Analysis (JHA) – a form used to identify the task and break it down into steps, identify the hazards associated with each step, and identify the control measures used for each step to protect the worker, environment or public. This form is also commonly referred to as Job Safety Analysis (JSA).
- B. Arc Flash – a dangerous condition associated with the possible release of energy caused by an electric arc.
- C. Competent Person – one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them
- D. Hot-Work – any activity using tools or equipment resulting in the generation of sparks or open flame. This includes, but is not limited to, cutting or burning with torches, welding, grinding, and the use of reciprocating saws
- E. Incident – any unplanned or unexpected event that results in personal injury, property damage, or environmental release
- F. Near-miss Incident - any unplanned or unexpected event that could have resulted in personal injury, property damage or environmental release, but does not, due to luck, chance, or other circumstances.
- G. Project Minimum Personal Protective Equipment (PPE) – ANSI Z87.1 safety glasses/shields; hard hat; work boots or protective footwear; gloves; hearing protection; and high visibility vest
- H. Qualified Person – one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.
- I. Site Safety Representative – a Contractor’s employee(s) who is exclusively assigned to the project based on the contract scope of work, responsible for all aspects of Safety on the project site(s), and assigned to the site(s) on a full-time basis for the entire duration of construction activities.
- J. Work Areas – Refers to the perimeter of the work area for that specific Contractor.

## 5.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

- A. The list of general health and safety requirements set forth in this Article is not a comprehensive list of all requirements that may apply to Work under this Contract. In addition, some of the specified requirements may not apply to the Work under this Contract, depending on the type and scope of the Work. Contractor is solely responsible for determining and complying with all applicable health and safety requirements in accordance with applicable laws, rules, and regulations.
- B. Contractor shall implement a zero incident philosophy on the project and establish a goal of zero accidents and zero injuries with work tasks designed to minimize or eliminate hazards to personnel, process, equipment, environment, and the general public.
- C. Contractor shall develop and use Activity Hazard Analyses (AHAs)/Job Hazard Analyses (JHAs) that address all elements of work required by Cal/OSHA to be undertaken by the Contractor.
- D. Contractor shall have a written Lockout/Tagout Procedure that complies with CCR Title 8, Section 3314. The written program will also be coordinated with and submitted to SFPUC facility personnel when applicable based on scope and location of work.
- E. The Prime Contractor shall be the Controlling Contractor for all confined space operations or work and shall have a written Confined Space Program that complies with CCR Title 8, Subchapter 4 Construction Safety Orders, Section 1950-1962 and shall submit as part of the Contractor's site specific HASP for all contracts with confined space work. Contractor shall provide City Representative with documentation of confined space entrant(s), attendant(s), supervisor(s), and rescue training.
  - 1. The following Confined Space requirements shall be incorporated into the Contractor's Confined Space Program and are required for working within all SFPUC jobsites and assets:
    - a. Contractor's Project Site Safety Representative shall be present at the worksite from the time that entry into a permitted confined space is initiated until exit from the confined space has been completed for all confined space entries.
    - b. Each entrant shall be equipped with a four-gas meter capable of detecting hydrogen sulfide (H<sub>2</sub>S), carbon monoxide (CO), oxygen (O<sub>2</sub>), and Lower Explosive Limit (LEL) gases in accordance with Cal/OSHA atmospheric testing requirements for confined spaces.
    - c. Include procedures to coordinate entry operations for all persons entering the confined space.
    - d. Contain site specific procedures required to protect employees and any members of the public within 100 feet of the confined spaces entrance(s).
    - e. Shall include an evaluation of the hazards identified with the confined space(s) that may cause a particular space to be deemed or cause a space to become a Permit-Required Confined Space.
    - f. Shall include a provision to communicate any immediate hazard posed by the confined space or hazards within the confined space to SFPUC or other City personnel
    - g. Shall include a debriefing at the conclusion of confined entry operations to report any hazards encountered or created within the confined space.

- h. For all permit-required confined space entries, shall follow the subsequent additional requirements:
    - i. Contractor's Project Site Safety Representative shall be present, within 100 feet from the entrance(s), and fulfill the role of the Entry Supervisor from the time that entry into a permitted confined space is initiated until exit from the confined space has been completed.
    - ii. The Contractor shall continuously monitor the confined space using a four-gas meter equipped with pump module which draws air across the sensor and capable of remote sampling by use of extendable wand, or probe attached to the meter by tubing, into the hazardous atmosphere while the user remains outside the confined spaces.
    - iii. Each entrant shall remain connected to a retrieval device, have a self-contained self-rescuer device with a minimum of 10 minutes of air, or must have a rescue service or crew able to respond to a rescue summons in a timely manner, considering the hazard(s) identified and capable of fulfilling the Cal/OSHA requirements, as delineated in Subchapter 4. Construction Safety Orders Article 37. Confined Spaces in Construction.
    - iv. If Contractor plans to utilize a rescue crew, service, or emergency service, the Contractor shall submit the following for City Representative's review and acceptance prior to entry.
      - 1. Documentation showing who will provide rescue services.
        - a. If using an emergency service provider to perform rescue or rescue standby, the Contractor must submit a copy of a letter of agreement from the named emergency service provider, stating the emergency service provider will provide confined space rescue and understands the hazards of the confined space for the work performed under this contract.
      - 2. Documentation demonstrating adequate training of rescue personnel if using Contractor or subcontractor personnel to perform rescue.
  - 2. For entry into all Wastewater assets:
    - a. The Contractor shall notify the designated Wastewater Operations personnel upon entry and exit of each asset. This includes, but is not limited to, entry onto Wastewater Treatment Plants/Pump stations, outfalls, manholes, transport boxes, cisterns, storm drains, etc.
  - 3. For all work performed within SFPUC Wastewater Treatment Plants and Pump Stations, or other SFPUC Wastewater facilities, no personal vehicles will be allowed onsite.
  - 4. The Contractor, along with the Contractor's SSR, shall to meet with the City Representative to receive a Contractor Advisement after NTP and prior to start of work. The purpose of the Contractor Advisement is to provide specific information about potential hazards and to review the SFPUC procedures, specific to the planned confined space work within any of our existing assets and/or facilities.
- F. Contractor shall have a written Fall Protection Plan which must require fall protection for all work activities that occur at a height of 6 feet or greater. Fall Protection Program shall be required by the Contract dependent on the scope of work. No work

- may occur above 6 feet without fall protection/fall arrest system in place. All aspects of the plan shall be communicated to all affected employees and subcontractors.
- G. Hoisting of personnel on a personnel platform by a crane or derrick is prohibited, except when the erection, use, and dismantling of conventional means of reaching the worksite, such as a personnel hoist, ladder, stairway, aerial lift, elevating work platform or scaffold, would be more hazardous or is not possible because of structural design or worksite conditions. This type of operation must meet the requirements of Cal/OSHA regulatory requirements.
  - H. Never raise a load over people or occupied buildings. Tag lines must be used to control every load. All materials shall be rigged to prevent unintentional displacement. Hooks with self-closing safety latches shall be used to prevent components from slipping out of the hook. Defective rigging equipment shall be tagged and removed from service. Only trained persons shall rig materials to be hoisted.
  - I. Only qualified operators may operate power equipment. Seat belts must be worn if available or required.
  - J. Safe lifting procedures for cranes and hoists must be developed, documented, and provided to the City Representative upon request. Crane and hoist operators and qualified riggers must conduct rigging equipment inspections prior to each use on each shift and as necessary during its use.
  - K. Preventative maintenance must be conducted on cranes, hoists, or other equipment use on the project in accordance with manufacturer's guidance or regulatory requirements.
  - L. Riding on hooks, headache balls, slings of hoisting equipment, or sideboards/tailboards of equipment is strictly prohibited.
  - M. Scaffolds shall be built per Cal/OSHA standards.
  - N. All scaffolds must be inspected by a Qualified Person before use and must be designed for the safe working load. Guardrails and toe-boards shall be used on all scaffolds and secured per Cal/OSHA requirements. Rolling tower scaffolds must be locked while the scaffold is in use.
  - O. Scaffold platforms which are 6 feet, or greater, above any working surface must be equipped with a guardrail system – Top rails (42 inches plus or minus 3 inches), mid rails (midway between the top rail and the scaffold platform) and toe boards – or personal fall arrest systems must be utilized.
  - P. No scaffold shall be erected, moved, dismantled, or altered except by trained personnel under the authority of the Qualified Person.
  - Q. The Scaffold Tag System shall be implemented using red, yellow, and green tags.
  - R. Outriggers and platforms below the working/walking level shall be fully planked.
  - S. Contractor shall perform a Shock Risk Assessment, in accordance with NFPA 70E – 130.04, and Arc Flash Risk Assessment in accordance with NFPA 70E – 130.5 prior to performing electrical work on any and all equipment operating at 50 volts and higher.
  - T. Energized lines/equipment shall not be installed, repaired or removed, except by an Electrician who has successfully completed a NFPA 70E course or an equivalent course. Documentation of training shall be submitted to the City Representative upon request.
  - U. Prior to Final Completion and prior to turning over equipment, Contractor shall affix all final required Arc Flash labeling.

- V. Electrical equipment shall not be installed, repaired, or removed except by trained qualified electricians.
- W. Temporary lighting must be guarded.
- X. All 120-volt, single phase 15 and 20-ampere receptacle outlets on construction sites, which are not part of permanent wiring of the building or structure and are in use by employees, shall have approved Ground Fault Circuit Interruption (GFCI) for personnel protection.
- Y. Extension cords must be at least 16-gauge heavy duty 3-wire with a UL approved three prong ground plugs.
- Z. Gasoline and similar flammable liquids must be stored only in and approved safety containers and in areas free of bringing hazards.
- AA. Open fires are strictly prohibited on the job sited.
- BB. Every hot-work operation must have a properly trained and equipped fire watch with appropriate fire extinguishers for the specific hazard in the work area. The fire watch must remain in the work area for at least 30 minutes after the hot-work activity is completed.
- CC. The contractor will utilize a hot-work permit system when working in/around a combustible environment.
- DD. Defective tools and equipment must be taken out of service and shall be properly repaired before reuse.
- EE. Compressed gas cylinders shall remain standing and securely tire doff, whether empty or full. Valves shall be closed on all empty cylinders. Protection caps shall remain on cylinders when not in use.
- FF. When cylinders are not in use, they must be secured and capped. If cylinders are not used within a 24-hour period, they are considered to be in storage, and must be secured, capped, and separated. Separate oxygen and fuel gas cylinders by a minimum distance of 20 feet or by a noncombustible barrier that is at least 5 feet high, and has a fire-resistance rating of a 1/2 hour.
- GG. A motor vehicle engine shall not be left running if the vehicle/equipment is unattended unless it is necessary in the normal operational requirement of the unit. Unattended means that the operator has left the normal control position of the vehicle. The vehicle shall be placed in PARK on the transmission, emergency brake set and at least one rear wheel chocked.
- HH. All moving equipment must be equipped with back-up alarms.
- II. Job-made wooden ladders can be utilized on the job site if they meet Cal/OSHA requirements.
- JJ. Stepladders (A-Frame) must be fully open and cannot be used as straight/extension ladders.
- KK. Tie-off all straight and extension ladders to keep them secure. Straight and extension ladders must extend 3 feet beyond the top landing. The base of the ladder shall be set out at least one-fourth of the ladder height measured from bottom to point of bearing.
- LL. Contractor is responsible for cleaning up and removing hazardous and non-hazardous waste generated on the job site.
- MM. Each Contractor shall be responsible to maintain areas where he is performing work free from waste materials, debris, and rubbish.
- NN. All protruding nails in form lumber, boards, etc., must be withdrawn or bent into the wood before the wood is stacked or piled.



- OO. Provide a proper collection container and floor protection when using cutting oil, solder flux, hydraulic oil, and other fluids. In the event of a large spill, immediately install acceptable containment barriers and notify the City Representative.
- PP. Follow the safety standards for Tunnel work as specified in Cal/OSHA Title 8, Section 8400-8568 regulations. The Contractor is required to provide the necessary Emergency Rescue Team.
- QQ. Alcoholic beverages, recreational drugs, and people under the influence of these substances are not permitted on the job site.
- RR. Weapons and firearms are strictly prohibited on the job site.
- SS. Heavy equipment operators are prohibited from using music radios/headsets, cellular phones, internet access devices, and other similar distracting objects/devices while occupying the cab of the equipment when the heavy equipment is idling or operating on the jobsite.
- TT. No cameras or video equipment are permitted on site except as necessary to document the progress of the Work, as may be allowed under the Site Security Guidelines or approved by the City Representative.
- UU. Smoking is only allowed in designated project areas based on the City Representative's approval.
- VV. Horseplay and fighting are prohibited.
- WW. Protect floor openings by providing adequate barricades and secured covers. All covers must be painted with high visibility paint or shall be marked with the word "HOLE" or COVER" to provide warning of the hazard.
- XX. All project employees to include trade workers, vendors, and visitors must comply with the project's security and access program as outlined in the Contract Documents.
- YY. All liquid hazardous materials must be properly contained in accordance with the Contract Documents and environmental regulations.
- ZZ. Park in designated Contractor-parking areas. The driver of any motor vehicle on job site is responsible for its safe condition and use. The driver is required to have a valid driver's license and the vehicle must have a valid license plate. All job site traffic rules must be obeyed.

## 6.0 STAFF ORGANIZATION

- A. The Contractor shall develop an organizational structure that sets forth lines of authority, responsibility, and communication. The Contractor shall include a description of this organization and responsibilities of each key personnel (see Article 11.0, below)
- B. The Contractor shall designate in writing, subject to contract requirements, at least one individual to be the full time Site Safety Representative (SSR). If more than one project site working shift is initiated, the Contractor will have to ensure that provisions are made to have a qualified SSR for all work shifts.
- C. A SSR shall possess at a minimum, the following qualifications:
  - 1. OSHA 30-hour Construction Safety and Health trained, instructed by an OSHA Authorized Trainer.
  - 2. First Aid/CPR trained within the past two (2) years.
  - 3. Trained and experienced in the hazards and complexity of site and contract scope.
- D. The SSR should also have formal documented safety training as required by Cal/OSHA or other state regulations, including but not limited to the following:

1. Fall Protection (if applicable)
  2. Material Handling (if applicable)
  3. Confined Space (if applicable)
  4. OSHA 500 (Authorized 30 hour construction trainer)
  5. Excavation (if applicable)
  6. Scaffolding (if applicable)
  7. Confined Space (if part of the scope for this project)
- E. The SSR shall be physically present at the site during all working hours. The SSR shall be available 24 hours a day, 7 days a week by telephone or other approved means.
- F. Contractor shall provide at least two (2) individuals on the job site current in CPR/First Aid training. A job site is defined as an area where work is occurring, and qualified CPR/FA response is immediately available. When a project has multiple job sites, spanning large areas, the Contractor is to determine whether the need for more than two qualified CPR/FA responders may be necessary. Where Contractor provides Automatic External Defibrillators (AEDs), at least two individuals must be trained in its use.
- G. If applicable, the Site Safety Representative (SSR) must be physically present during tree felling operations, from the commencement of tree felling until the work is complete.
- H. Contractor must identify and certify Competent Persons as defined by Cal/OSHA for work or tasks requiring this level of qualification or supervision. The personnel identified must be present on the project when work requiring the Competent Person(s) is taking place. The name(s) of the Competent Person(s) will be provided by the Contractor to the City Representative in writing prior to start of such work activities, along with copies of their training as a Competent Person, to an appropriate level for the scope of work being performed.
- I. All Contractor employees, City and Project Representatives shall have “Stop Work Authority” – the ability to stop work without any adverse consequences when unsafe conditions are present.

## 7.0 CONTROLLED SUBSTANCE ABUSE AND ALCOHOL

- A. The City, Contractors, and the Unions are committed to protecting the health and safety of individual employees, their co-workers, and the public at large from the hazards caused by the misuse of drugs and alcohol on the job. The safety of the public, as well as the safety of fellow employees, dictates that employees are not permitted to perform their duties while under the influence of drugs or alcohol. Accordingly, the Contractor agrees to comply with the Substance Abuse Policy as described above and will submit a Contractor’s Substance Abuse Policy to the City Representative.
- B. Contractor agrees to apply the policy and to ensure compliance with the Project’s Drug and Alcohol free environment.

## 8.0 TRAINING

- A. Contractor must comply with all applicable Cal/OSHA training requirements.

- B. Contractor Managers, Supervisors, and Site Safety Representatives must attend a Site-Specific Safety Orientation training conducted by the City that will include site-specific hazards and controls.
- C. The Contractor shall provide a Project Orientation session that includes site hazards, procedures, and all requirements. (See Article 11.0, below). This Orientation will be provided to all Contractor employees and all employees of Subcontractors working on the project site. This training shall be documented. Records shall be kept on site and available for review by the City Representative.
- D. Prior to working on the Site, Contractor's Superintendents must have completed a 30-hour OSHA Construction Safety and Health training from an OSHA Authorized Trainer. The Contractor must submit documentation of such training to City Representative.
- E. Crane operators shall meet the Cal/OSHA requirements for certification. Proof of current certification shall be provided to the City Representative prior to commencement of crane activities on the job site.
- F. Confined Space Training Requirements:
  - 1. Entrants shall receive Confined Space Entry training that shall establish employee proficiency, which meets the current Cal/OSHA standards, and is intended to instruct employees working within confined spaces. The Contractor shall provide documentation of this training to the City Representative upon request.
  - 2. Employees working as Attendants shall receive Confined Space Entry training, equal or better to that of employees working within the Confined Space. Employees who work as Attendants shall receive additional training that shall establish employee proficiency as an Attendant, which meets the current Cal/OSHA standards. The Contractor shall provide documentation of this training to the City Representative upon request.
  - 3. The Contractor's Site Safety Representative shall receive Confined Space Entry training, equal or better to that of employees working within the Confined Space. The Site Safety Representative shall also receive training that shall establish the SSR's proficiency as the Confined Space Entry Supervisor and which meets the current Cal/OSHA standards. The Contractor shall provide documentation of this training to the City Representative upon request.
  - 4. Confined Space Rescue Personnel who work for the Contractor, a subcontractor, or lower tier contractor shall receive documentable training which meets the current Cal/OSHA standard for both employees who are entrants and specific training for Confined Space Rescue which shall train that employee to perform the assigned rescue duties. An employee designated as Rescue Personnel shall, at minimum, take part in practice Confined Space Rescue once a year by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed. The Contractor shall provide documentation of this training and a copy of each such employee's current First Aid/CPR training to the City Representative upon request.
- G. CPR/First Aid trained persons assigned to the work covered by this Contract must have received training within the past two (2) years. First-aid/CPR training must be from the U.S. Bureau of Mines, the American Red Cross, or equivalent training that can be verified by documentary evidence, shall be available at the worksite to render first

aid. Persons who received First Aid/CPR training online will not be accepted as the Contractor's First-aid/CPR persons for the work covered under this Contract.

- H. Electrician working on energized equipment/lines must successfully complete an Arc Flash safety training that contains the requirements referenced in Cal/OSHA Electrical Safety Orders, NFPA 70E, and covers the work which will be performed under the Contract scope. Submit documentation of such training upon request of the City Representative.

## 9.0 MEETINGS

- A. The Contractor (at a minimum) shall conduct "toolbox" safety meetings per Cal/OSHA standards. The safety meeting must be documented including the attendance, subject outline, and submitted to the City Representative.
- B. The Contractor's Project Manager, Superintendent(s), and SSR shall attend City Representative meetings as required to review project Immediately Dangerous to Life and Health (IDLH), stop work activities, incidents, and incident investigations.

## 10.0 PROJECT ACTIVITY HAZARD ANALYSIS/ JOB HAZARD ANALYSIS PROGRAM

- A. Contractor shall develop AHA/JHA for job site work activities which may pose a known hazard and is based on their three-week look-ahead project schedule.
- B. The Contractor will submit the completed AHAs/JHAs to the City Representative prior to conducting work activities. The submission of AHAs/JHAs to the City shall not be construed as approval of the adequacy of the Contractor's SSR, the AHAs/JHAs, the Contractor's HASP, or any safety measures taken in or near the construction site.
- C. Contractor's supervision will monitor workers which includes observing a worker's behaviors and comparing them against the written AHA/JHA.
- D. Observations by supervision indicating non-compliance with AHAs/JHAs should be corrected immediately and documented. The observation program should be reviewed at the monthly Contractor safety committee meetings conducted by the Contractors Site Safety Representative.

## 11.0 SITE-SPECIFIC CONTRACTOR HEALTH AND SAFETY PLAN (HASP)

- A. Contractor shall be responsible for developing, implementing, enforcing, and submitting a site-specific Contractor HASP consistent with all CCR Title 8 or other applicable regulations, depending upon their scope of work. The scope shall be stated within the HASP.
- B. The Contractor shall prepare a site-specific Contractor Health and Safety Plan (HASP). Contractor HASP shall establish, in detail, the protocols necessary for the recognition, evaluation, and control of all hazards associated with each task performed by the Contractor and lower tier subcontractors. The Contractor HASP shall be site specific and cover all work to be performed under this Contract.
- C. Contractor shall include with the HASP or as separate submittal, an Infectious Disease Preparedness and Response Plan (IDPRP) to protect workers from any and all infectious diseases. IDPRP must provide specific controls, measures, and steps to protect workers from coronavirus, specifically COVID-19; conform with OSHA laws and guidance, Cal/OSHA laws and guidance, all local and San Francisco City and

County Orders and guidance, and San Francisco Department of Public Health Orders; and the IDPRP shall be updated should Orders and guidelines change. A copy of the most current Orders and guidelines may be obtained through the City Representative. It is the responsibility of the Contractor to ensure their IDPRP is up to date and conforms with current health Orders and guidelines.

- D. The Contractor HASP must be reviewed, and approved by signature, by the Contractor's Project Manager and the SSR, then submitted to the City Representative as specified in Article 2.0 of this Section. Submission of the HASP to the City, or any review of the HASP by the City, shall not be construed as approval of the adequacy of the Contractor's SSR, the Contractor's HASP or any safety measures taken in or near the construction site.
- E. The Contractor HASP shall address site-specific safety and health requirements and procedures based upon site-specific project conditions and scope.
- F. Contractor will develop a HASP that complies with requirements as set forth in this Section 00 73 19.
- G. A Copy of the Site Safety Representative's Department of Labor OSHA 30 card, a copy of the SSR's valid First Aid/CPR training documentation, and resume shall be submitted with the Health and Safety Plan (HASP).
- H. The Contractor's HASP shall describe the emergency and first aid equipment to be provided by each Contractor and utilized for the project.
- I. The Contractor's HASP shall include a written Hot-Work Program. The Contractor's written Hot-Work Program shall follow SFPUC Hot-Work guidelines delineated within the Contract Documents, pre-bid conference, and pre-construction conference. A sample Hot-Work Permit shall be included in the Contractor's HASP and made available to the City Representative upon requested.
- J. An Example project safety inspection form shall be provided in Contractor's HASP and shall include date, work area checked, employees present in the work area, PPE, work equipment being used in each area, safety and health issues, notes, and signature of inspector.
- K. The formats for all safety forms and reports shall be developed by the Contractor and submitted as part of the Contractor HASP.
- L. The Contractor shall include an organizational structure in the HASP that sets forth lines of authority, responsibility, and communication, including a description of this organization and responsibilities of each key personnel.
- M. Contractor shall develop Emergency Response and Contingency Planning procedures that will be included in the Contractor HASP to address potential emergencies that may occur during a task, relative to the Contractor's scope of work. The Emergency Response and Contingency Planning procedures shall identify the closest medical facility that provides urgent/emergency services by name, address, and include a map to the identified the best route to that medical facility.
- N. Names and qualifications (resumes including education, training, experience, and certifications) of all site safety and health personnel designated to perform work on this project will be provided in the HASP when submitted to the City Representative. Submissions will include the designated Site Safety Representative and other Competent Persons and Qualified Persons to be used on the project in support of job site safety requirements.
- O. Contractor will include the following information in the HASP, as applicable:
  - 1. Confined Space Entry Plan
  - 2. Crane Critical Lift Plan

3. Fall Protection and Prevention (FP&P) Plan
  4. Activity Hazard Analysis (AHA) /Job Hazard Analysis (JHA)
  5. Written Hazard Communication Plan which conforms to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for workplace chemicals brought to the site must be established. Contractor shall also maintain a Safety Data Sheet (SDS) for all products/chemicals brought to the project site and make available to the City Representative, upon request.
  6. Emergency Response Plan
  7. Excavation Plan
  8. Arc Flash Risk Analysis
  9. Lead/Asbestos Program
  10. Tree Felling Plan
- P. Any changes or modifications to the Contractor's HASP must be signed by the Contractor's Project Manager and SSR and submitted to the City Representative for review. When accepted, the modifications shall be appended to the Contractor HASP. All on-site personnel shall be fully informed of the modifications and required actions.
- Q. The Contractor's HASP shall describe the Contractor's plan for compliance with the Substance Abuse Policy as outlined in Article 7.0 above. The Contractor's plan for compliance with the Substance Abuse Policy will include but not be limited to the following:
1. Contractor's method for ensuring that all employees required to take a pre-employment substance abuse test on this project are tested.
  2. The name and telephone number of the Contractor's Designated Employer Representative for the Substance Abuse Policy.

## 12.0 INSPECTIONS

- A. Contractor SSR shall perform daily inspections of their active field work area(s) covering workplace conditions, physical facility safety, and employee work practices. Any deficiencies and corrective actions shall be documented. The daily inspection shall be documented in the Contractor's Weekly Health and Safety Report submitted to the City Representative.
- B. Each piece of heavy equipment shall be inspected upon delivery to the Site, at the beginning of each work shift, and prior to use. Heavy equipment inspection documentation shall be submitted to the City Representative upon request.
- C. Crane inspection documentation shall be submitted to the City Representative prior to use. The Contractor shall provide current inspection documentation and Certification per OSHA that the crane operator is qualified and trained in the operation of the crane to be used.
- D. Cranes shall be visually inspected prior to each shift by the Contractor's competent person. The inspection must include observation for deficiencies during operation. The inspection must be written and a copy submitted to City Representative if requested.

## 13.0 INCIDENT REPORTING AND INVESTIGATION

- A. Contractor employees involved in or witnessing an Incident must immediately report it to the responsible supervisor or foreman. The Contractor must, in turn,

- immediately notifies the City Representative. This notification shall be by phone initially and then followed-up by an email.
- B. Contractor will allow City Representatives to participate and review all project incident and/or near-miss investigations.
  - C. Contractor employees involved in or witnessing a Near-Miss Incident must report it to the responsible supervisor or foreman in a reasonable time frame, not to exceed 24 hours. Thereafter, the Contractor must immediately notify the City Representative.
  - D. No supervisor may decline to accept or relay a report of injury or significant near-miss incident from a subordinate.
  - E. All incidents and significant Near-Miss Incidents are investigated immediately by the Contractor's individual or team with training in accident investigation and root cause analysis.
  - F. No work should continue in the incident area until the hazard and/or behavior that caused the incident are corrected by the Contractor.
  - G. The Contractor must investigate incidents and submit an initial investigation report to the City Representative using a Contractor Incident Investigation Report within 24 hours of learning about the incident. Final Report to be submitted to City Representative within 48 hours of incident.
  - H. A final Root Cause Analysis and corrective actions report for the incident will be conducted by the Contractor and submitted to City Representative within 10 working days.
  - I. The Contractor must investigate near-miss incidents and submit an investigation report to the City Representative using a Contractor Incident Investigation Report within 24 hours of learning about the near-miss incident.

#### 14.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

- A. Contractor shall define task specific PPE requirements for all personnel in compliance with applicable laws, rules, and regulations.
- B. PPE shall be worn at all times on the Site, including travel within the Site when starting or ending shifts. Minimum requirements include:
  - 1. Hard hats are required at all times in the work area areas.
  - 2. Appropriate eye and face protection that complies with ANSI Z87 shall be worn at all times.
  - 3. Safety glasses with side shields are required as minimum.
  - 4. Sensible and safe work clothing/shoes must be worn.
  - 5. No canvas /leather sneakers or sandals will be worn.
  - 6. Appropriate hearing protection shall be worn in work areas where levels exceed established standards.
  - 7. Suitable gloves must be worn to protect the hands from injury as appropriate.
  - 8. High visibility warning vests or other suitable garments marked with or made of reflection or high-visibility material must be worn at all times on the project.
- C. The Contractor's SSR shall establish appropriate levels of protection for each work task.
- D. For electrical work, Personal Protective Equipment (PPE) and other Protective Equipment shall also conform with all NFPA 70E guideline (NFPA 70E 130 (G) provides guideline based on calculating an incident energy analysis method, based on

- the Hazard Risk Category for the equipment they have assessed as the tables 130.7(C)(14), 130.7(C)(15)(a), and 130.7(C)(15)(c), as applicable).
- E. If respiratory protection is utilized, the Contractor will have a Respiratory Protection Program in compliance with Cal/OSHA requirements. The Contractor will also provide the following to the City Representative prior to beginning work utilizing or requiring respiratory protections:
    - 1. Copies of the Respiratory Program
    - 2. Respirator training records
    - 3. Fit-testing and medical approval documentation
    - 4. Annual documentation for training, fit testing, and medical evaluations
  - F. All respiratory equipment will be provided to the employees by the Contractor and properly inspected and maintained by the employees per Cal/OSHA regulations.
  - G. Where “Hot-Work” is involved, a Hot-Work permit must be submitted to the City Representative prior to work. Protective clothing that provides thermal protection shall be required.
  - H. Safety harnesses must be worn per manufacturers and OSHA requirements in manlifts.
  - I. Workers must wear a safety harness with their safety lanyard secured to a separate lifeline while working from swing scaffolds, boatswain’s chairs, or other suspended work platforms where a fall hazard is present.
  - J. Proper personal protective equipment must be worn for welding and burning. Welding screens must be used when welding operations have the ability to expose other employees or the general public.

## 15.0 EMERGENCY EQUIPMENT

- A. The Contractor shall provide the required emergency and first aid equipment to be utilized for the project. The following items, at a minimum, shall be maintained on-site and available for immediate use:
  - 1. First aid equipment and supplies approved by a physician, including first aid kits and eyewash station.
  - 2. Spill control materials and equipment, including multi-purpose absorbent materials, poly bags, brooms and shovels and drums.
  - 3. Fire extinguishers with a minimum rating of 2A-10B:C and as required by OSHA regulations for scope of work.
  - 4. Emergency rescue equipment (if applicable), including SCBA or escape pack (with a minimum of 10 minutes of air), and tripod/extraction equipment for confined space rescue or tunnel rescue; backboard/basket for transport of injured personnel, air horns/bull horns for emergency signaling and communications.
  - 5. All site Contractor safety personnel, project managers, and key line supervisors will be equipped with two-way radios for emergency communications.
  - 6. All boats and vessels (if applicable) used on the project shall comply with the U.S. Coast Guard regulations and carry all Coast Guard-required safety equipment, including adequate personal flotation devices and signaling devices.



## 16.0 LOGS, REPORTS AND RECORDKEEPING

- A. Contractor shall maintain Project safety audits, equipment safety inspection logs, incident reports, and all reports covering the implementation of Contractor HASP on the project site for review upon request by the City Representative.
- B. Contractor shall submit Monthly project safety statistical report to City Representative that includes hours worked by Contractor, OSHA Recordable Incidents, Incident Rates, Lost Work Day Cases, Total Project Lost Work Days, and Days Away from Work Rate, First Aid Cases, and Property Damage Incidents.
- C. Contractor shall submit Weekly Safety Inspection Reports to the City Representative which includes corrective actions.
- D. Contractor shall allow City Representatives access to all Contractor operations and records. The City's review of Contractor's logs and records documenting safety performance shall not be construed as approval of the adequacy of any safety measures taken in, on or near the construction site, nor shall it relieve the Contractor of its responsibilities of performing and enforcing health and safety inspections/audits, monitoring or any other components of the project safety requirements and site-specific Contractor HASP.

## 17.0 REMEDIAL ACTION

- A. The City Representative will issue a notice of non-compliance to ensure that observed immediately dangerous to life and health situation(s) and repeated failure to comply with health and safety requirements violations are corrected by the Contractor in a timely manner. The notice will document non-compliance and requires an immediate action to remedy and correct the non-compliance with a written response from Contractor's Project Manager within 24 hours of receipt of this notice.
- B. If Contractor repeatedly fails to comply with applicable health and safety laws, rules, regulations, and orders, the City reserves the authority to have the necessary work performed by others and deduct corresponding costs from Contractor's progress payment(s), suspend progress payments, and terminate the contract for cause.
- C. The Contractor's non-compliance with applicable health and safety laws, rules, regulations, orders and contract safety requirements shall be considered failure by the Contractor to perform a provision of the Contract, and may be cause for the suspension of the Work and/or the discharge from the Work of an employee, Subcontractor or Supplier as set forth in the General Conditions. The Contractor will be responsible for all costs for stoppage of work and/or replacement of employee(s).

END OF SECTION