

**CENTRAL CONTRA COSTA SANITARY DISTRICT  
(CENTRAL SAN)**

**CENTRAL SAN SAFETY REQUIREMENTS  
FOR  
SEWER CONSTRUCTION PROJECTS**

## INDEX

	<u>PAGE NO.</u>
I. Contractor Duties	3
II. General Safety Requirements	3
A. Basic Rules	3
B. Personal Protective Equipment	3
C. Power Tools	4
D. Traffic Control	4
E. Trenching/Excavations	5
F. First Aid	5
G. Fire Prevention	5
III. Confined Space Entry	5
A. Scheduling	5
B. Communications	6
C. District Right to Cancel	6
D. Pre-entry Procedures	6

## I. CONTRACTOR DUTIES

The Contractor expressly assumes any and all duties to assure safety on the job site and all areas affected by the work related activities. Contractor and its subcontractors shall comply with all applicable federal, state, and local safety standards, regulations, ordinances, rules, and requirements in the performance of the contract work. In addition, Contractor and its subcontractors shall comply with all requirements and directives in this appendix. Contractor shall take any and all additional precautions necessary to prevent injury to all persons (employees, subcontractors, and the public), damage to property (both public and private), or releases to the environment.

Contractor has the duty to inform all its employees, subcontractors, and suppliers of the safety requirements on its job site and shall enforce these requirements. Contractor shall not allow employees or subcontractors to begin work on Central Contra Costa Sanitary District (Central San) projects without a safety orientation specific to the potential hazards of the project.

## II. GENERAL SAFETY REQUIREMENTS

### A. Basic Rules

1. Use of alcoholic beverages and/or illegal drugs is strictly prohibited. Workers who use prescription and non-prescription drugs that may interfere with the ability to work safely are prohibited from the work site.
2. The Contractor shall maintain all portions of the job site in a safe, orderly, clean, and sanitary condition at all times.
3. Toilets facilities shall be furnished by the Contractor for use of its employees per CCR Title 8, Construction Safety Orders §1526, and their use shall be strictly enforced.

### B. Personal Protective Equipment (PPE)

1. Contractor shall be responsible for providing, fitting, training, and assuring the use of PPE including but not limited to hard hats, eye and face protection, hearing protection, respiratory equipment, foot protection, etc.
2. The Contractor's personnel shall wear hard hats and appropriate foot protection at all times while on the project work site, except in offices or vehicles.
3. Proper eye and/or face protection shall be worn whenever there is a risk of exposure to airborne particulates, liquids, or compressed gases.

C. Power Tools

1. Electric powered hand tools shall be protected by approved ground fault circuit interrupters, or shall be double insulated.
2. Fixed electric power tools, such as table saws, pipe threaders, etc., shall be properly wired and grounded.
3. Pneumatically driven power tools shall be disconnected from air lines when not in use. Air lines shall be properly clipped together. Safety features must not be bypassed or defeated.
4. Powder-actuated tools shall be used only by licensed personnel who have a valid license in their possession.

D. Traffic Control

1. All contractors doing work on Central San projects shall:
  - a. Install and maintain required traffic control devices per the approved traffic control plan approved by the local jurisdiction having authority.
  - b. Provide appropriately equipped and trained flaggers when required.
  - c. Schedule and expedite the work to cause the least inconvenience to the public and Central San operations and activities.
  - d. Provide adequate safeguards for workers, Central San personnel, and the public.
  - e. 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. Be outfitted with retroreflective material visible at a minimum of 1,000 feet for night-time work.
2. All work on streets, roadways, or similar thoroughfares shall comply with the State of California Department of Transportation's "Manual on Uniform Traffic Control Devices" and any local ordinances.

No work may be performed in any public right of way without permission from the authorizing agency (i.e., local traffic engineering, public works department, and/or police).

E. Trenching/Excavations

Contractor shall comply with California Code of Regulations (CCR) Title 8, Construction Safety Orders (CSO), Article 6, Excavations Construction Safety Orders and CCR Title 8 §341 – 341.5

F. First Aid

The Contractor shall keep adequate first aid facilities and supplies available. Contractor shall provide instruction in first aid to employees of the Contractor and subcontractors.

The Contractor shall provide first aid and medical treatment for its employees and comply with the first aid requirements of the Cal/OSHA Construction Safety Orders. The Contractor shall make prior arrangements for emergency medical care and for transportation of injured Contractor or subcontractor personnel.

G. Fire Prevention

The Contractor shall follow the requirements in California CCR, Title 8, (CSO), Article 36 “Fire Protection and Prevention” and General Industry Safety Orders (GISO), Article 88 “Fire Prevention in Welding and Cutting Operations.”

The Contractor shall have fire extinguishers on the job site. When work is being performed that generates sparks or open flame activity, appropriate fire extinguishers shall be available at the specific work site for use in case of fire. All employees shall be trained to use fire extinguishers.

III. CONFINED SPACE ENTRY

Contractor shall comply with the provisions of CCR, Title 8, GISO, Article 108 “Confined Spaces and CCR Title 8 CSO, Article 37, Confined Spaces in Construction.” In addition, the Contractor shall comply with the requirements contained herein.

The following sections contain minimum requirements for project work. Central San or the Contractor may impose stricter requirements dictated by specific conditions. A written copy of the Contractor’s confined space operating and rescue procedures shall be kept at the site and be available for review by the Central San representative at all times.

A. Scheduling

The Contractor shall schedule the confined space entry at least one working day prior to the planned entry. The exact location of the space, nearest cross street, exact house or business address, or site map shall be provided to the Engineer. A list of personnel that will be working at the location of the confined space entry shall be provided at least one working day prior to the entry. If information that is provided prior to the entry

changes, the Contractor shall provide the Central San representative with the changes before the actual entry takes place. If a change occurs in the schedule for an entry, the Contractor shall be responsible for coordinating the rescheduling with the Engineer.

B. Communications

In addition to the above, the Contractor shall notify the District representative of the planned entry and ensure that communication devices are functioning immediately prior to the actual entry. Generally, cellular phones are the only approved method of emergency communication. Contractor shall note that 9-1-1 may not be readily accessible by cellular phones in certain areas of the County. Contractor shall verify and confirm such accessibility or obtain the local fire/rescue telephone number before the confined space entry and shall establish alternative method of communication if necessary to ensure the safety of its personnel.

A fully charged cellular phone with a back-up battery or vehicle adaptor shall be available prior to the entry. The phone shall be positioned immediately adjacent to the point of entry so that emergency assistance can be summoned directly. This practice does not, however, relieve the Contractor of the responsibility to immediately notify the Central San representative of any unusual occurrence at the confined space entry site. If this equipment is not available, no entry into the space shall be made. If the cellular phone becomes inoperative during a confined space entry, the entry shall be terminated and rescheduled.

C. Central San Right to Cancel

Central San may deny a planned confined space entry or cancel an in-progress confined space entry if conditions (e.g., noncompliance with procedures, inclement weather, unacceptable interruptions to operating systems, etc.) so dictate.

D. Pre-entry Procedures

1. Entry Permit: The Contractor may submit its own confined space entry permit form for approval, or may use the District's form. The Contractor shall provide notice to the Central San representative at least one working day prior to commencing a confined space entry. The Confined Space Entry Permit shall be kept at the job site, and shall be returned to the Central San representative when the confined space entry has been completed.
2. Block Lines: THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE DISTRICT REPRESENTATIVE BEFORE BLOCKING ANY SEWER LINES.

The Contractor shall make submittals as required.

3. Gas Detection Meters:

- a. Gas detection meters shall have independent sensing elements capable of detecting and monitoring flammable gas, vapor or mists; oxygen; hydrogen sulfide; and carbon monoxide. Physical properties to be monitored include:
- flammable gas, vapor, or mists lower flammable limit (L.F.L.) - (10 percent L.E.L. maximum)
  - oxygen - (19.5 percent minimum, 23.5 percent maximum)
  - hydrogen sulfide concentration - (10 ppm maximum)
  - carbon monoxide concentration - (25 ppm maximum)

Although flammables, hydrogen sulfide, oxygen deficiency, and carbon monoxide are of main concern, other gas detection equipment (such as colorimetric gas detection tubes) may be required if other contaminants are suspected.

Meters shall have digital readout displays for the sensing elements. Alarms shall be both audio and visual. Meters shall have lights or other visual means of warning of sensor failure or when batteries need recharging. Calibration gases shall be used to calibrate the meters according to manufacturer's specifications. Equipment shall provide a means for remote sensing.

- b. Testing. The Contractor shall test the air with properly calibrated and maintained gas detection equipment. The Contractor shall calibrate the gas detection equipment according to manufacturer's specifications no longer than two weeks prior to the confined space entry and at least once a month thereafter throughout the period requiring such confined space entries. The Contractor shall check gas detection equipment daily for proper operation, including verification that the equipment is electrically functional and has been tested with the calibration gas. The Contractor shall make a written record of the daily maintenance check.
- c. Monitoring. Atmospheric monitoring shall be continuous. The Contractor shall record pre-entry air monitoring results on the Permit and shall continue to record air monitoring results on the Permit at intervals not to exceed fifteen minutes. If the alarm sounds, monitor malfunctions, or batteries die, the entrants shall be removed from the space until repairs can be made to the monitor.

4. Retrieval Systems (Side Entry)

Each Contractor's employee working in a confined space where entry is made through a side opening such as a pipeline or tunnel

shall wear a safety harness with line attached which complies with the requirements of Cal OSHA regulations.

5. Retrieval Systems (Vertical Entry)

Each Contractor's employee working in a confined space where entry must be made through a top opening shall wear a safety harness with line attached. An approved hoisting device, such as a tripod and winch (self-retracting lifeline), shall be provided for lowering and lifting employees out of the space.

6. Training: Prior to commencing any confined space entry, the Contractor shall provide workers associated with confined space entries with appropriate equipment and adequate training. Rescue and emergency personnel shall be CPR/First Air trained and respirator qualified. Attendance records of training sessions shall be maintained by the Contractor. These records shall be available to the District representative upon request.

7. Cellular Telephone: The Contractor shall provide its employees with a fully charged cellular telephone with a back-up battery at each confined space entry site. Refer to Section III.C on accessibility.

8. Alternate Procedure Confined Space Entries: Certain projects may include work on existing manholes where complete bypassing is used and sewer inlets and outlets are plugged, newly constructed sanitary sewers, or newly constructed manholes where existing sewers have not been broken into and no coatings are being applied. If the Contractor complies with the following minimum requirements, these newly constructed sanitary sewers and manholes may be entered under Alternate Entry Procedures per CCR Title 8 CSO §1952(e):

- a. The atmosphere's air quality in the manhole or sewer shall be initially checked prior to entry using an acceptable gas detection meter to ensure that a safe atmosphere exists.
- b. The air quality in the manhole or sewer shall be continuously monitored using gas detection meters with readings on the meter being regularly monitored at intervals not to exceed fifteen minutes.
- c. Continuous mechanical ventilation shall be provided into manholes or sewers throughout duration of the entry.