# CODE OF SAFE PRACTICES

**California Department of Transportation**

**Division of Construction**

**September 2020**

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California Department of Transportation
Division of Construction

Prepared by

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**Cover photo:** Crews are constructing pavement for High Occupancy Vehicle (HOV, or carpool) lanes on I-5 near Empire Avenue in Burbank. (Photo is from @My5LA Twitter Account, Caltrans District 7)

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## About the CODE OF SAFE PRACTICES

The *Code of Safe Practices* (COSP) is part of the California Department of Transportation (Caltrans) Injury and Illness Prevention Program (IIPP) and complies with requirements of the California Code of Regulations, Title 8, Section 1509 (8 CCR 1509), "Injury and Illness Prevention Program." This COSP defines standard safety practices for Caltrans staff.

Each Caltrans resident engineer is responsible for verifying that the COSP provides the required safety practices for all activities on their current project.

Caltrans Division of Construction will revise and update the COSP to keep current with new construction activities, methods, and changing construction environments. Employees should forward suggestions for improving the COSP, adding specific construction operation safety protocol, or questions concerning the COSP to the personnel responsible for maintaining the document on the Division of Construction website:

https://construction.onramp.dot.ca.gov/safety

Responsible personnel:
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## DISCLAIMER

8 CCR 1509 requires that each employer prepare a Code of Safe Practices (COSP) that applies to the employees' operations. This requirement makes the COSP an independent employer responsibility not covered under 8 CCR 336.10, "Determination of Citable Employer," as a multi-employer responsibility. As a result, this COSP is applicable solely to Caltrans personnel when they are performing field duties in accordance with their respective job descriptions. It is not for use by any other parties.

The most current version of this document supersedes all previous versions. For ongoing projects, the resident engineer should follow the procedures outlined in Section 2, "General Safety," and include the most current version of the COSP in the project files when the project begins.

## *TABLE OF CONTENTS*

SECTION 1 – OBJECTIVE ..... 1
SECTION 2 – GENERAL SAFETY ..... 2
2.1 Zero Tolerance for Violence in the Work Place ..... 2
2.2 Accident and Incident Reporting ..... 2
2.3 Personal Protective Equipment ..... 3
2.4 Alert and Distraction-Free ..... 3
SECTION 3 – FIELD SAFETY ..... 4
SECTION 4 – EQUIPMENT ..... 5
SECTION 5 – TRAFFIC CONTROL SYSTEMS ..... 6
SECTION 6 – HEAT ILLNESS ..... 7
6.1 Training ..... 7
6.2 Access to Shade ..... 8
6.3 Provisions for Water ..... 8
6.4 Supervisor Procedures ..... 8
SECTION 7 – HAZARDOUS MATERIALS EXPOSURE ..... 11
7.1 Hazardous Substances ..... 11
7.2 Hazardous Wastes ..... 11
7.3 Hazardous Spills ..... 12
SECTION 8 – VEHICLE OPERATIONS ..... 13
8.1 Parking ..... 13
8.2 Flashing Amber Lights ..... 13
8.3 Vehicle Backing ..... 14
8.4 Vehicle Accidents ..... 14
SECTION 9 – FACILITIES ..... 15
SECTION 10 – SPECIAL CONSIDERATIONS ..... 17
10.1 Night Work ..... 17
10.2 Excavations ..... 17
10.3 Elevated Work Areas ..... 18
10.4 Electrical ..... 19
10.5 Confined or Enclosed Spaces ..... 20
10.5.1 Definitions ..... 20
10.5.2 Permit-Required Confined Space Entry Procedures ..... 21

10.5.3 Non-Permit-Required Confined Space Entry Procedures ..... 21
10.6 Material Plant Sites ..... 23
10.7 Field Testing ..... 24
10.7.1 Testing Portland Cement Products ..... 24
10.7.2 Testing With Nuclear Gauges ..... 24
10.8 Respirable Crystalline Silica ..... 25
10.8.1 Background ..... 25
10.8.2 Employee Exposure Procedures ..... 26
10.8.3 Respiratory Protection ..... 26
10.8.4 Special Procedures for Material Testers Working in District or Field Labs ..... 27
10.9 Lead-Contaminated Soils ..... 27
10.10 Yellow Paint Stripe and Markings Removal ..... 28
10.11 Rubberized Hot Mix Asphalt ..... 28
10.11.1 Background ..... 28
10.11.2 Handling Procedure ..... 29
10.12 Naturally Occurring Asbestos and Asbestos Abatement ..... 30
10.12.1 Background ..... 30
10.12.2 Employee Procedures (Naturally Occurring Asbestos or Demolition of Portland Cement Concrete) ..... 30
10.12.3 Other Asbestos Exposure ..... 30
10.12.4 Biological Contaminants ..... 30
10.13 Methacrylate, Polyester Concrete, High Friction Surface Treatments, and Multi-Layer Systems Operations ..... 31
10.13.1 Background ..... 31
10.13.2 Handling procedures ..... 31
10.14 Valley Fever ..... 32
10.14.1 Background ..... 32
10.14.2 Engineering Controls ..... 33
10.14.3 Administrative Controls ..... 33
10.14.4 Personal Protective Equipment ..... 34
10.14.5 Mandatory Valley Fever Training ..... 35
10.14.6 Reporting Valley Fever Illness ..... 36
10.14.7 Additional Information ..... 36
10.15 Coronavirus (COVID-19) ..... 36
10.15.1 Background ..... 36
10.15.2 Basic Prevention Measures ..... 37
Proper Etiquette and Good Hygiene ..... 37
10.15.3 COVID-19 Information and Resources ..... 38
10.15.4 Protocols ..... 39

Safety Protocols on Projects ..... 39
COVID-19 Exposure Notice Protocol ..... 39
APPENDIXES ..... 41
Appendix 1—Respirators in Various Caltrans Construction Operations ..... 41
Appendix 2—Sample Confined Space Entry Checklist (HS-0040) ..... 43
Appendix 2—Sample Confined Space Entry Checklist (HS-0040) (cont.) ..... 44
Appendix 3—Project Team Acknowledgment and Signature Sheet ..... 45
Appendix 4—Sample Letter to the Contractor During the COVID-19 Pandemic ..... 46
Appendix 4—Sample Letter to the Contractor During the COVID-19 Pandemic (cont.) ..... 47
Appendix 5—Caltrans Office of Health and Safety Checklist ..... 48
Appendix 5—Caltrans Office of Health and Safety Checklist (cont.) ..... 49
Appendix 5—Caltrans Office of Health and Safety Checklist (cont.) ..... 50

## SECTION 1 – OBJECTIVE

The Division of Construction developed the Code of Safe Practices (COSP) as part of its safety program to provide a safe working environment for construction personnel. The objective of the COSP is to provide Caltrans construction staff with guidelines and highlight safe practices and procedures for most field-related activities.

The COSP is part of Caltrans' Injury and Illness Prevention Program (IIPP), which also includes the *Caltrans Safety and Health Manual* (*Safety Manual*), portions of the *Construction Manual* and *Standard Specifications*, and contract-specific standard special provisions that address safety. In addition to the COSP, the resident engineer should be familiar with the provisions of the California Code of Regulations, Title 8 (CCR Title 8), "Industrial Relations," applicable to the work in order to limit Caltrans' noncompliance with California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) regulations.

The first goal of Caltrans' mission and vision is to "Provide a safe transportation system for workers and users, and promote health through active transportation and reduced pollution in communities." Caltrans construction employees and our contracting partners are part of this strategic mission and vision.

This COSP provides guidance when performing your duties in the field. Always consider your own safety while you are at the job site and while observing contractor's operations and make sure to check the safety instructions in the project's COSP.

# SECTION 2 – GENERAL SAFETY

The resident engineer should print Sections 1 through 9 of this Code of Safe Practices (COSP) and mark the appropriate items on the Table of Contents to indicate which parts of Section 10 are applicable to the project. After marking the applicable items, print those parts of Section 10 and Appendixes 1 through 5.

When first assigned to a project or first visiting a project, employees should read the project COSP, and sign and date the signature sheet in Appendix 3, thereby agreeing to follow these guidelines. Employees should also review Chapter 2, "Safety and Traffic," of the *Construction Manual*. File the resulting signed COSP in Category 6, "Safety," of the project file to comply with Section 2-106A, "Caltrans Division of Construction Code of Safe Practices," of the *Construction Manual*.

Resident engineers and construction engineers should review each project for other potential safety issues. If additional safety measures are needed, supervisors should instruct employees or request assistance from district construction safety coordinators to provide instruction on unique safety issues for their projects.

Caltrans field employees assigned to any construction project should comply with the requirements outlined in the Caltrans IIPP, *Safety Manual,* and this COSP.

## 2.1 Zero Tolerance for Violence in the Work Place

Section 6.02, "Policy Statement," of the *Safety Manual* states, "It is the policy of Caltrans to promote a safe and healthful work environment and to take appropriate action to protect, as much as possible, its employees and members of the public from prohibited behaviors such as acts of violence, threats, harassment, intimidation, or other abusive conduct which may occur at Caltrans workplaces or during the performance of duties." Caltrans is committed to working with its employees to maintain a work environment that is free from violence and abusive behavior.

Caltrans has zero tolerance for any acts of violence, threats, harassment, intimidation, or abusive conduct—in any form. It is up to each employee to help make the state workplace a safe place for all. It is expected that each employee will treat all other employees, as well as members of the public, with professionalism, dignity, and respect. Individuals who engage in the prohibited behaviors described in Director's Policy DP-18-R3, "Workplace Violence Prevention Policy," may be subject to corrective action under California Government Code, Section 19572.

## 2.2 Accident and Incident Reporting

Employees are responsible for immediately reporting damage to their assigned state vehicle; accidents or incidents; and unsafe conditions, procedures, or work practices to their resident engineer and supervisor. Personal injuries to employees should be reported in accordance

with Chapter 10, “Reporting Personal Injuries and Illnesses,” and vehicle accidents in accordance with Chapter 18, “Motor Vehicle Accidents,” of the *Safety Manual*.

## 2.3 Personal Protective Equipment

Chapter 12, “Personal Protective Equipment,” of the *Safety Manual* discusses personal protective equipment (PPE) requirements:

- All employees must wear a white hard hat with a Caltrans decal.
- All employees must wear a minimum of American National Standards Institute (ANSI)/International Safety Equipment Association (ISEA) 107-2004, or equivalent subsequent revisions, Class 2 garments during daytime hours and must wear ANSI/ISEA 107-2004, or equivalent subsequent revisions, Class 3 garments during hours of darkness when performing duties outside their vehicles within the state right-of-way.
- All employees must wear ANSI Z87.1-1989-rated eye protection during any work activity that may expose them to eye injury.
- Additional safety equipment, such as gloves, face protection, hearing protection, and rain gear must be used or worn when dictated by the situation as described in the *Safety Manual,* or as ordered by the supervisor. All equipment must be in compliance with CCR Title 8 requirements.
- Employees must wear clothing and footwear appropriate for the job to be performed and not shoes with soft, thin, or badly worn soles.
- Employees must follow the respirator guidelines in Chapter 15, “Respiratory Protection Program,” of the *Safety Manual*.

By law, all employees must wear seat belts and harness devices when operating state, state-leased, or private vehicles while performing state business in accordance with Chapter 17, “Motor Vehicle Safety,” of the *Safety Manual*. Passengers must also wear such devices.

## 2.4 Alert and Distraction-Free

Employees must not drive or report to work if their abilities are impaired by fatigue, alcohol, prescription or nonprescription drugs, illness, or other causes that might expose them or others to injury.

In active work zones, employees must not use personally owned communication devices including, but not limited to, cell phones, bluetooth devices, or entertainment devices. Employees may use a communication device for business purposes in a work zone at a location where their safety or the safety of other workers and the traveling public will not be compromised.

## SECTION 3 – FIELD SAFETY

Each construction field office should hold tailgate safety meetings at least every 10 working days to discuss potential hazards or other safety concerns with ongoing projects. The meetings should be documented and the meeting minutes posted in a conspicuous place at the field office in accordance with Chapter 2, "Safety Meetings," of the *Safety Manual*.

Section 5-1.01, "General," of the *Standard Specifications* requires that the contractor provide the inspector safe access to project sites at all times during construction. If a contractor's practice does not comply with contractual requirements or CCR Title 8 and you are not being provided safe access to perform your job duties, follow the procedures in Section 2-103, "Managing Safety Hazards," of the *Construction Manual.* Remember to always remove yourself from the hazardous area promptly. Then, consider starting a documentation trail to show lack of safe access and requests to the contractor to provide safe access to our employees. Include these items in the documentation trail:

- Identified improper practices based on contractual requirements or CCR Title 8 reference.
- Documented conversations with a contractor foreperson or superintendent requesting immediate correction of the safety deficiency or, as necessary, provision of a timeline for correction and potential consequences for failure to abate the deficiency.
- How and when the safety deficiency was abated.
- If the contractor fails to abate the deficiency within a reasonable time frame, inform the resident engineer of the actions taken, and follow up with the appropriate contractor's representative to request abatement.
- If the safety deficiency is not abated in a timely manner based on the resident engineer's request, or if the safety deficiency is repeated later, the resident engineer should write a letter to the contractor detailing the safety deficiency event with a timeline for correction and potential consequences for failure to correct the deficiency. All available contractual resources should be considered, including potentially stopping the operation, shutting down the job, removing personnel, and requesting that Cal/OSHA representatives visit the job site after consultation with the construction manager and the district construction safety coordinator in accordance with Section 2-103A, "Imminent Hazards," of the *Construction Manual*.

Employees should minimize their exposure to hazards and stay away from work areas when their presence is not required.

Employees should face oncoming traffic unless they have a clear reason for doing otherwise and should be alert to contractor equipment in the work zone.

When inspecting or sampling in isolated areas, employees should notify their supervisors or resident engineers of their location and time of return. It is desirable that each employee is accompanied by another, if available, known as the "buddy system."

Employees should not assist contractors in performing any contract task except for resetting of cones or barricades when it is safe to do so and necessary for access.

## SECTION 4 – EQUIPMENT

Work around construction equipment requires special precautions. Your priority is to observe the operation and determine if you have safe access to perform your job duties:

- Before entering a work area, determine movement patterns of the contractor's equipment.
- The contractor must confirm that the equipment has backup alarms, guards, lighting, and other safety features installed as required by CCR Title 8. Notify the contractor about equipment not in compliance and ask that the operation be stopped until equipment is brought into compliance.
- Employees must listen for automatic backup alarms for mandated equipment—or verify appropriate administrative controls are in place where backward movement would constitute a hazard to employees—in the work area as required by 8 CCR 1592, "Warning Methods." If you note noncompliance, follow the procedures outlined in Section 3, "Field Safety," of this COSP.
- Employees must not enter into areas potentially in a blind spot of the equipment operator. Employees must follow these rules around the work area:
    1. Never assume that an equipment operator can see you.
    2. Establish eye contact with the operator and use hand signals to show your intentions.
    3. Do not proceed until the equipment operator signals to you that it is safe.
    4. Face moving equipment unless there is clear reason for doing otherwise.
    5. Do not ride on or operate any contractor's equipment.

**Exceptions:**

- You may cross a paving operation by walking across the screed.
- Always position yourself away from the path of overhead operations, paying special attention to crane operations. Avoid walking or standing under overhead operations, crane booms, suspended loads, or the fall path of a snapped cable.
- Stay clear of pile driving operations. Pieces of broken piles or hammers can fly throughout the area causing injury.

## SECTION 5 – TRAFFIC CONTROL SYSTEMS

Construction personnel should exercise care whenever working in the roadway environment, including conducting preconstruction surveys, working within or outside of contractor-established traffic control, or conducting post-construction surveys.

- When entering or leaving a work area adjacent to public traffic, use appropriate traffic signals and proceed with the normal traffic flow.
- Face traffic unless there is clear reason for doing otherwise. Plan in advance an escape route in case an errant vehicle enters the work area. Have another employee act as a safety lookout while you work, if someone is available.
- Plan work in advance to keep employee exposure to public traffic to a minimum.
- Where workers are engaged in construction activities, park vehicles in the shoulder or closed lanes of travel between oncoming traffic and the work location to provide barrier protection.
- When required to cross traffic lanes on foot, provide enough time to walk across the lanes safely.
- Employees should stay in their vehicles while in a lane closure unless inspection duties require otherwise.
- Employees should not work in or within 6 feet of the traveled way without proper signage or a lane closure.

**Exceptions:**

Within 6 feet from the traveled way, brief operations may be conducted without using a lane closure or signage, if the following conditions are met:

1. Parking or working is limited to no more than 20 minutes.
2. Traffic volume is light.
3. Sight distance is at least 500 feet in each direction. If not, the resident engineer should work with the contractor to provide safe access for employees to work inside a lane closure.
4. Employees feel it is safe to do so. If they do not feel safe or the above provisions cannot be met, they should speak with their resident engineer or supervisor and ask to work behind a contractor-established lane closure.

## *SECTION 6 – HEAT ILLNESS*

Heat illness prevention is a requirement of 8 CCR 3395, "Heat Illness Prevention in Outdoor Places of Employment." All employees should review Chapter 23, "Heat Illness Prevention Program," of the *Safety Manual* to better understand Caltrans' program requirements to meet 8 CCR 3395. Employees need to pay special attention to Sections 23.04, "Caltrans Heat Illness Prevention Plan," and 23.06, "Types of Heat Illness/Symptoms and First Aid," of the *Safety Manual*.

### 6.1 Training

All employees must receive heat illness prevention training before being assigned to a field location. The training is to be documented in the employee's training record. Supervisors are responsible for confirming that their employees are trained in accordance with Chapter 23 of the *Safety Manual*.

Supervisors and employees should be aware of the health risks associated with working and performing work activities in environments that may contribute to heat illness. Knowing what factors can increase risk will enable you to take steps to reduce problems while working in the heat. The following are steps that supervisors and employees can take to help prevent heat stress:

- Discuss the increased risks when working in high heat exposure areas, such as exposure to radiant heat from mechanical sources or on hot days.
- Drink plenty of water—***1 quart per hour***. Thirst is not a good indicator of how much water the body needs. Drink more water or other fluids than needed to satisfy thirst. It is best to regularly replenish the water lost from sweating by drinking small amounts frequently throughout the work shift.
- Take preventive recovery periods. Depending on conditions, such as air temperature, sun exposure, or physical exertion, more frequent recovery periods may be needed. A preventive recovery period means taking time to recover from working in the heat in order to prevent heat illness. This period will be no less than 5 minutes. Outside the right-of-way, use available or provided shade for recovery. Inside the right-of-way, use your vehicle for shade or relocate to a cooler location.
- Wear PPE to guard against heat exposure. When possible, wear comfortable, loose, lightweight clothing that allows body heat to be released. Cover your head.
- Implement the buddy system, where employees stay in contact with each other, observe each other throughout the day, and immediately report any signs or symptoms of heat illness to the supervisor or responsible person in charge.
- Acclimatize to hot work. This usually requires several days working in the heat for short periods, gradually increasing work time and intensity. Consider alternative work schedules, such as working earlier or later, to avoid the times when heat is most severe. Regardless of physical condition, employees need to acclimatize appropriately for their work conditions.

- Eat light meals. It is better to eat light during the workday when exposed to heat because hot, heavy meals add heat to the body and divert blood to the digestive system.
- Avoid drinks with alcohol, caffeine, and large amounts of sugar as these can contribute to dehydration. Remember that personal risk factors such as acclimatization, age, and health affect the body's water retention and physiological responses to heat. Follow the doctor's or pharmacist's instructions regarding medications taken, including any for using the medicines in heat or sun-intensive environments.
- Know the symptoms and first aid for stages of heat illness.

## 6.2 Access to Shade

For construction employees, a state vehicle with continuously running air-conditioning is typically your primary area for shade.

## 6.3 Provisions for Water

Potable water is available at all resident engineer offices and at all state maintenance facilities. It is your responsibility to obtain sufficient water, 1 quart per hour, for the entire shift.

Water coolers are available through the state warehouse (1 gallon = 4 quarts). Headquarters warehouse does not carry paper drinking cups; therefore, they are not in the State Product Catalog. However, paper drinking cups may be stocked in district warehouses. Please check with your local district warehouse to see if they are available, or if they can be purchased from a vendor or retailer.

2-gallon cooler:

| Item Number | Name | Unit | Description |
|---|---|---|---|
| 7240 0065 2 | CAN | EA | WATER COOLER CAN 2 GALLON, PLASTIC W/FLUSH MOUNTED SPIGOT |

5-gallon cooler:

| Item Number | Name | Unit | Description |
|---|---|---|---|
| 7240 0075 3 | CAN | EA | WATER COOLER CAN 5 GALLON, PLASTIC W/FLUSH MOUNTED SPIGOT |

## 6.4 Supervisor Procedures

The supervisor must comply with the Heat Illness Prevention Program. Supervisors include first-line supervisors, second-line supervisors, or other persons in the chain-of-command designated as the responsible person in charge. Supervisors need to consider having documentation on file, as part of tailgate safety meetings or the resident engineer's daily report, that addresses key elements of 8 CCR 3395. These elements include:

*Responsible person in charge*—If multiple inspectors are assigned to an operation, designate one person as the responsible person to remind employees to drink water, even if not thirsty, increase the number of water and rest breaks, observe employees for alertness and signs of symptoms of heat illness, and increase communication with employees. If working alone, employees should confirm that their supervisors are aware of their working conditions and are responsible for providing the items listed in Section 6.3, "Provisions for Water," of this COSP.

*Temperature check*—Check the forecast temperature before the start of each day's operations. If temperatures are expected to exceed 95 degrees Fahrenheit, inform the responsible person in charge to closely monitor other Caltrans staff as described in this chapter and in Section 23.04, "Caltrans Heat Illness Prevention Plan," of the *Safety Manual*.

*Water supply*—Inform employees where they may obtain water and discuss procedures for refilling their water supplies during the shift, as necessary.

*Acclimatization*—Supervisors must allow time for new employees brought on during the season to acclimatize to working in the outdoor environment. Pay special attention to employees when there are increases in temperatures; who move from an office environment to the field during the season; or to employees who may have been working in mountainous or coastal areas who are temporarily or permanently reassigned to work in valley or inland areas.

*Emergency response*—Confirm that employees know whom to call in case of emergency. Account for personnel on the call list who are not available to answer the phone because of vacation or working an alternate shift. Areas in the region may lack cell phone reception. Identify the closest location where cell phone service, a roadside assistance telephone, or the nearest business phone is available to use in case of emergency. When notified that an employee may be suffering from a heat-related illness, maintain communication with the employee. If symptoms do not dissipate, respond or assign another employee to go to the affected individual's location to provide medical or other assistance, as necessary. If inspectors are working by themselves and the contractor is present, coordinate with the contractor to provide assistance to Caltrans staff in an emergency. If necessary, implement emergency procedures as described in Section 23.06, "Types of Heat Illness/Symptoms and First Aid," of the *Safety Manual* and in this section, and call 911.

*Emergency procedures*—Call 911 and confirm employees know how to call for emergency services. Confirm employees know how to direct emergency services to their project location. Use the project description as listed on the contract plans title sheet as a basis for project location. For projects with multiple locations, additional description may be necessary for each location. The location should reference the route number, distance, and direction from the nearest cross street, interchange, or landmark feature; for example, Highway 101 in Mendocino County, 2.5 miles north of Redwood Valley Drive. Do not use postmiles for location, because emergency responders are not always familiar with county postmile numberings. If the location is inaccessible, plan ahead how employees will be transported to a point where they can be reached by emergency medical service personnel if necessary.

Options include making sure a vehicle is available to transport the affected person to a predetermined location that is accessible to emergency medical service personnel.

## SECTION 7 – HAZARDOUS MATERIALS EXPOSURE

Construction projects use many different materials, either individually or in combination, to meet contract requirements. Employees encounter different conditions on construction sites because of environmental conditions, such as wind velocity or direction, and wet conditions that may affect how hazardous materials disperse. The contractor may be using known or unknown materials that require special handling if the material spills. The contractor is responsible for responding to these spills based on direction provided by the product safety data sheets and established requirements of the approved water pollution control plan or stormwater pollution prevention plan.

Do not handle or transport hazardous substances under the contractor's control unless you have been specially trained, for example as a materials tester, to handle or transport hazardous materials and your duties require it.

### 7.1 Hazardous Substances

Chapter 16, "Hazardous Materials Communications Program," of the *Safety Manual* discusses Caltrans' policy on hazardous substances and requires that a copy of the chapter be posted at the field office.

The contractor should provide the resident engineer with a list of hazardous substances present at the project site, maintain safety data sheets, and make them readily accessible to employees. Product names provided should match products in use in the field. If there is a discrepancy, ask the contractor to obtain and provide the resident engineer with the appropriate safety data sheets.

District offices should provide employees with the general information and training on hazardous substances to comply with the Caltrans Hazardous Materials Communication Program. Training should be provided for specific hazardous materials the employee may be exposed to on the job site.

### 7.2 Hazardous Wastes

When unknown and potentially hazardous wastes are discovered, employees should remove themselves from the area and inform the resident engineer and contractor of the unknown or potential hazardous waste. Employees should not reenter the area until the waste is identified and the issue is resolved.

## 7.3 Hazardous Spills

If employees identify a known hazardous spill, they should remove themselves to a safe distance, make the necessary phone calls and wait for emergency responders to arrive, then follow responders' direction. Employees should inform the traffic management center, district dispatch, or the radio room (after-hours California Highway Patrol) of any potential hazardous spill. They should not undertake exploratory work. The resident engineer should review the water pollution control or prevention plans and provide hazardous spill emergency numbers to all field staff.

## SECTION 8 – VEHICLE OPERATIONS

Employees should review Chapter 17, "Motor Vehicle Safety," of the *Safety Manual* before operating a state vehicle. Drive vehicles defensively. The vehicle operator is responsible for the proper care and maintenance of assigned equipment and must not operate an unsafe vehicle.

Do not transport hazardous materials in state vehicles unless specifically authorized. Fuel should be carried only in approved fuel containers.

### 8.1 Parking

- Park vehicles in accordance with legal requirements for parking on public streets and highways.
- Stay at least 25 feet clear of the tracks when parking within railroad rights-of-way.
- Where workers are engaged in construction activities, park vehicles in the shoulder or closed lanes of travel between oncoming traffic and the work location to provide barrier protection.
- Avoid parking behind or in the operating area of the contractor's equipment.

### 8.2 Flashing Amber Lights

Amber warning lights are discussed in Section 17.13, "Amber Warning Lights," of the *Safety Manual.* Flashing amber lights include such devices as flashing incandescents, flashing LED, rotating beacons, and light bars.

- General use—When the vehicle is equipped with an amber light, follow these guidelines:

Lights ON:

1. Entering or leaving a closure with the appropriate turn signal.
2. Moving at slow speed in or near traffic.
3. When using a vehicle as a barrier to protect workers.

Lights OFF:

1. When parked in a closure (emergency flashers may be used).
2. Operating in normal traffic.
3. When no danger to employees or motorists exists.

- Night use—Use discretion so you do not blind or distract traffic needlessly.

## 8.3 Vehicle Backing

Employees should review and follow Section 17.10, “Vehicle Backing Policy,” of the *Safety Manual*.

## 8.4 Vehicle Accidents

If an employee is involved in a vehicle accident with a state, leased, or privately owned vehicle used for state business, the employee must complete Form STD 270, “Vehicle Accident Report,” scan it, email it, and mail it to the district safety office within 48 hours. Follow all other accident reporting procedures documented in Section 18.03, “Motor Vehicle Accidents Reporting and Forms,” of the *Safety Manual*.

## SECTION 9 – FACILITIES

Refer to Chapter 5, "Office and Field Safety," of the *Safety Manual* for information on office work. Consider field construction facilities as including field construction offices, resident engineer offices, field labs, and adjacent areas used by Caltrans.

- Each facility should post emergency telephone numbers and services in a conspicuous place.
- Arrange field construction facilities, furniture, and supplies safely for easy entrance and exit.
- Store or dispose of hazardous or flammable substances properly.
- Employees should take responsibility for immediately reporting unsafe conditions, procedures, or work practices to their supervisors for corrective action.
- Employees should be aware of the location of fire extinguishers and first aid kits.
- Keep aisles clear of boxes, books, or miscellaneous equipment that could cause employees to fall or injure themselves. Avoid leaving heavy objects on cabinets, bookshelves, and windowsills. In case of an earthquake, these objects can become airborne and cause injury.
- Maintain a minimum 24-inch width around office furniture, 36-inch entry for office cubicles, and minimum 44-inch width in hallways for walking. Be familiar with passageways and use care. Slow down through hallway intersections, especially when carrying hot beverages.
- Be familiar with the location of emergency action plan exits and escape routes to use in case of fire or earthquake.
- Maintain electrical cords in good condition. Avoid laying electrical cords where they can tangle with chair legs or create a tripping hazard. If possible, reroute cords to avoid crossing pathways. If necessary, provide additional electrical outlets.
- Use proper lifting and bending techniques for objects you can safely handle. If an object looks too bulky or heavy to lift—get help.
- Use care in opening top drawers of file cabinets, so they do not topple on you or other employees. Avoid leaving drawers open when not in use, even for brief periods, since open drawers create possible hazards for other employees. Secure cabinets taller than 5 feet to the wall or floor to keep them from falling.
- Provide an ergonomic workstation and use proper body posture to minimize musculoskeletal and visual problems. Refer to Chapter 7, "Ergonomics," of the *Safety Manual*.

- Employees should not move any furniture or equipment. If furniture or equipment needs to be moved, contact the facilities coordinator to arrange for movers.
- Store office supplies in areas set aside for that purpose and not where they can contribute to injury. Do not store materials on top of bookshelves or file cabinets or in walkways, hallways, or stairwells.
- Do not attempt to reach high shelves without a proper ladder or step stool. Avoid awkward reaches.
- Smoking is prohibited in all state facilities, including vehicles, stairwells, and restrooms. Smoking is allowed only in designated areas outside the building.
- It is illegal for any employee or member of the public to bring a firearm or weapon into a state facility or vehicle. Immediately report violations to your supervisor. Refer to Chapter 8, "General Health, Medical and Safety," of the *Safety Manual*.
- All employees should use a sign-out board that provides location and approximate return time information for the office to contact them in the event of an emergency.
- Employees should take care while operating and using office equipment to allow its future availability for all employees. Specific pieces of equipment are listed below:
    1. Desktop computer—Plug computers into an approved surge protector, and turn them off at the end of every day. Use proper ergonomics to eliminate eye strain and body aches.
    2. Alarm system—Be aware of proper operation, memorize passwords, and know emergency numbers to call during a false alarm.
    3. Copier, printer, and fax machine—Only authorized personnel should attempt to maintain and repair the equipment. Avoid contact with toner and ink.
    4. Paper cutter—Take extra precautions while using the paper cutter because of associated risk. Verify that the device, especially the spring-balanced cutting arm, is in proper working order before using. Make sure the cutting arm is locked and in a closed position after use and during storage.
    5. Coffee pot—At the end of the workday, be sure the coffee pot has been turned off to avoid unit overheating and potential damage, possibly resulting in a fire hazard.

## *SECTION 10 – SPECIAL CONSIDERATIONS*

### 10.1 Night Work

Work during hours of darkness creates special hazards because of the lack of visibility.

- In addition to required PPE discussed previously, employees must wear ANSI/ISEA 107-2004, or equivalent subsequent revisions, Class 3 garments at night.
- Employees must always work in lighted areas to comply with Section 7-1.02K(6)(a), "General," of the *Standard Specifications* and 8 CCR 1523, "Illumination." The minimum acceptable lighting is 10 foot-candles. Section 5-1.01, "General," of the *Standard Specifications* requires the contractor to provide employees with safe access to inspect the job.
- If employees believe the contractor is not providing sufficient light for their operations, they should notify the contractor that they will not be performing inspection duties until they have confirmation of compliance with 8 CCR 1523. If the contractor can't confirm compliance, employees should call the construction safety coordinator and ask for a safety review. If the field office has a light meter, employees should use it to check for compliance with 8 CCR 1523.

### 10.2 Excavations

Excavations are defined in 8 CCR 1540, "Excavations," as any cut, cavity, trench, or depression in an earth surface formed by earth removal.

Employees should not enter an excavation unless it is necessary to perform their work.

- Employees who need to enter an excavation should first determine that it is safe to do so.
- Employees should verify that required protection against ground movement and the prescribed access is in place. If the excavation is 5 feet or deeper, employees should review the excavation safety plan that the contractor prepared and resident engineer authorized, as required by Section 7-1.02K(6)(b), "Excavation Safety," of the *Standard Specifications* and verify that the contractor is following the excavation safety plan.
- Employees should verify that excavated material spoils piles are placed at least 2 feet from the edge of the excavation.
- Employees should be aware that an excavation can become subject to the requirements for a confined space.

- Employees should be aware that changed soil conditions may require modifications to shoring or sloping systems, including excavations less than 5 feet deep.
- Employees should know they may encounter hazardous waste during excavation processes. If they observe suspect material, they should inform the contractor, remove themselves from the area and follow Section 7, "Hazardous Materials Exposure," of this COSP.
- Employees should be provided with adequate protection by the contractor's delineation of the perimeter of the excavation when the contractor is not conducting operations at the location. Delineation can be provided in a number of ways, including using plating to cover the excavation or establishing a perimeter with tape line delineators.

## 10.3 Elevated Work Areas

In accordance with Section 12.16, "Fall Protection" of the *Safety Manual* and 8 CCR 1670, "Personal Fall Arrest Systems, Personal Fall Restraint Systems and Positioning Devices," an elevated work area is an open-side end of all scaffolds, runways, ramps, elevated platforms, thrust-outs, surfaces, wall openings, bridge decks, or other elevations 7.5 feet or more above the ground, floor, or level underneath, or other sloped surfaces steeper than 40 degrees.

There are two distinct elevated work area exposures possible for employees:

1. Work on a contract with contractor-installed fall protection systems—The contractor is required to provide safe access to Caltrans employees in accordance with Section 5-1.01, "General," of the *Standard Specifications*.
2. All other work—This might include pre- or post-construction project review, respectively or work on bridge decks with railings that don't meet 8 CCR 1620, "Design and Construction of Railings," standards discussed below.

Follow these work practices in elevated work areas for safety:

- Before employees enter an elevated work area, they should determine that proper worker protection is in place or readily available for use. This protection includes hand railings and walkways. If hand railings are used for fall protection, they must have a top rail 42 to 45 inches measured from the top surface of the rail to the floor, platform, runway, or ramp and a mid-rail halfway between the top rail and floor, platform, runway, or ramp in accordance with 8 CCR 1620. If there is not an established fall protection system, employees should not enter that area and must complete fall protection training.
- Each employee should use proper safety equipment and look for openings, loose covers, or other unguarded areas. Address safety deficiencies as described in Section 2, "General Safety," of this COSP.

- Contractors must provide standard fall protection, such as standard guardrails, catch platforms, safety nets, and use fall protection on open sides and ends of elevated work areas.
- Before employees enter work areas where no fixed standard protection is applied, they should have the concurrence of the resident engineer or structures representative and meet the following requirements:
    1. Employee has successfully completed the Fall Protection (LMS 100320) course.
    2. Employee has a fall protection harness and shock-absorbing lanyard that is the proper length for the work. This equipment must pass an inspection performed before each use and have a documented inspection by a competent person for fall protection at least twice a year.
- Employees should be aware that elevated work areas may encompass deep or enclosed spaces that may meet requirements for confined space entry.
- Employees should not work or pass below elevated work areas where protection from falling objects has not been provided.

Follow these practices for all other work:

- A Fall Protection Plan should be implemented by the supervisor.
- All employees who might be exposed to fall hazards are required to attend a general fall protection awareness training course. This training is for those employees who are not required to attend Fall Protection training (LMS 100320), which is required for employees who need to wear fall protection harnesses to perform their jobs.
- Employees should not approach within 6 feet of railings that are not in compliance with 8 CCR 1620, “Design and Construction of Railings,” on elevated structures. In accordance with 8 CCR 1671.2, “Controlled Access Zones and Safety Monitoring Systems,” if work within 6 feet of railings is of short duration (nonrepetitive) and limited exposure, work may proceed provided adequate risk control is recognized. A spotter should be used if possible.

## 10.4 Electrical

- Before beginning any wiring inspection, employees should follow appropriate lockout or tag-out procedures. Employees should verify that the contractor has completed work on the circuit and that the circuit is de-energized. Remember, all electrical equipment must be treated as energized until tested or otherwise proved de-energized.

- Most equipment with exposed metal surfaces is required to be grounded. Request that the contractor remove from service equipment with damaged or removed grounding prongs that could expose employees to harm.
- Conductors or equipment should not be located in damp or wet conditions; exposed to gases, fumes, vapors, or liquids with a deteriorating effect; or exposed to excessive temperatures unless approved for that purpose. If you observe this, remove yourself from that area and inform the contractor of the need for correction.
- Flexible cords should be protected from accidental damage. Verify cords are not placed at points where they can be pinched or damaged by closing a door or window edge. They should be protected from abrasion by adjacent materials. Any flexible cord whose outer sheath is damaged such that the conductor wiring is visible should be called to the attention of the contractor for removal from service.

If a generator is used to power a temporary office, it must be grounded according to the Electrical Safety Orders in 8, Subchapter 5. Electrical Safety Orders, Group 1. Low-Voltage Electrical Safety Orders, Article 11. Grounding (8 CCR 2395.1–2395.114), or manufacturer instructions.

## 10.5 Confined or Enclosed Spaces

### 10.5.1 Definitions

Chapter 14, “Confined Spaces,” of the *Safety Manual* provides detailed information about confined spaces. CCR Title 8 designates two distinct types of confined spaces. Confined spaces in construction are discussed in 8 CCR Article 37, “Confined Spaces in Construction,” encompassing Sections 1950-1962. Permit-required confined spaces are discussed in 8 CCR 5157, “Permit-Required Confined Spaces.” Other confined space operations are discussed in 8 CCR 5158, “Other Confined Space Operations.”

A confined space is a location that meets the following criteria:

- An employee can physically enter and perform assigned work.
- Access is limited or has restricted means of entry or exit.
- It is not designed for continuous employee occupancy.

  NOTE: Contractors use a different rule for confined space entry as detailed in 8 CCR Article 37. Their rule has only two provisions: (1) existing ventilation is not sufficient to remove dangerous air contamination, or oxygen enrichment or deficiency, and (2) ready access or exit for the removal of a suddenly disabled employee is difficult because of the size and

location of the opening. Caltrans employees must follow the provisions of Chapter 14 of the *Safety Manual* and this COSP.

- Confined spaces include such structures or facilities as tanks, bridge cells, shafts, pits, bins, tubes, pipelines, deep trenches, tunnels, vaults, vats, pump houses or compartments, sewage lift stations, culverts, coffer dams, and elevator pits. Caltrans employees must not enter any contractor's designated permit-required confined space. If the contractor has such a work location and inspection is required, immediately contact the resident engineer and the construction safety coordinator to request assistance. Caltrans employees are prohibited from entering or remaining in a confined space or an area otherwise known to be deficient in oxygen and containing harmful amounts of dusts, gases, or other substances.

### 10.5.2 Permit-Required Confined Space Entry Procedures

- Caltrans employees are prohibited from entering permit-required confined spaces at any time.

### 10.5.3 Non-Permit-Required Confined Space Entry Procedures

- Caltrans employees may enter a non-permit-required confined space work area if they have done all of the following:
  1. Attended a confined space course
  2. Reviewed the procedures in Chapter 14 of the *Safety Manual*
  3. Filled out the appropriate forms before entering
  4. Obtained calibrated atmospheric testing equipment and the training to use it

Employees must follow confined space entry procedures to identify if the work location is a confined space:

- Immediately before entry, verify radio communications with the radio dispatcher, resident engineer office, or California Highway Patrol for possible emergency rescue.
- Review emergency and rescue procedures. Post at each work site the name of and way to contact the rescue response agency.
- To the extent feasible, the space must be emptied and flushed or otherwise purged of flammable, injurious, or incapacitating substances.
- Verify that the space has continuous natural or mechanical ventilation.
- Test the air with an appropriate device to determine whether dangerous air contamination, oxygen deficiency, or explosive hazard exists.

- Maintain a written record of the testing results at the job site. Hazardous atmosphere is defined as an oxygen level below 19.5 percent by volume or a combustible gas content of greater than 10 percent lower explosive level (per OSHA Part 1915, Subpart B, App A); carbon monoxide greater than 25 parts per million (the American Conference of Governmental Industrial Hygienists Threshold Limit Value, known as ACGIH TLV) or hydrogen sulfide greater than 10 parts per million (the National Institute for Occupational Safety and Health Recommended Exposure Limit, known as NIOSH REL).

If the space atmosphere tests hazardous—Stop! Do not enter! Post a "Danger—DO NOT ENTER" sign.

- Maintain a log at the work site for recording:
  1. Name of person entering enclosed space
  2. Name of standby person
  3. Date and time of each entry and exit
  4. Initial percentage of oxygen
  5. Initial percentage of the lower explosive level value
  6. Periodic meter readings or notation of the use of continuous monitoring equipment
- Verify that suitable lighting is provided in the work area.
- At least one standby person must remain outside the enclosed space with an effective means of communicating with anyone in the enclosed space and with the radio dispatcher, resident engineer office, or California Highway Patrol.
- Conduct testing of the atmosphere with sufficient frequency to verify that dangerous air contamination and oxygen deficiency do not develop during the performance of an operation.

***If the atmosphere becomes hazardous, everyone must vacate the closed space immediately. Do not re-enter!***

Notify the radio dispatcher, resident engineer office, or California Highway Patrol upon exiting the enclosed space.

## 10.6 Material Plant Sites

The material plant site has its own potentially hazardous conditions common to the type of operation. The plant inspector will normally be the only state representative at the plant. When entering the two types of plant sites—job site and commercial site, employees must do the following:

- Comply with plant training requirements. Plants may have specific onsite training requirements in order to comply with the federal Mine Safety and Health Administration and CCR Title 8 requirements.
- Onsite use of the hard hat, ANSI/ISEA 107-2004, or equivalent subsequent revisions-compliant garments, and safety glasses are required at all times except when inside office areas. Some areas require the use of hearing protection.
- When entering or driving within the facility, be aware of access roads and their direction of travel.
- Report your presence to the plant operator before you enter the plant. Familiarize yourself with the plant operating procedures by reading the contractor's plant Code of Safe Practices (COSP) before beginning work, and follow the rules.
- Do not enter an unsafe work area. Specific work areas requiring inspection should have safe access and comply with CCR Title 8 requirements at all times. Be alert for overhead wires, tripping hazards, floor openings, and loose material on stairways or walkways. Look for exposed electrical sources.
- Avoid work areas where your presence is not required. Do not walk behind equipment, and look before moving into "blind" areas.
- Be particularly aware of the following conditions:
    1. Conveyors that start and stop without notice
    2. Hot asphalt lines and hot aggregate
    3. Flammable fuel storage tanks and lines
    4. Revolving and reciprocating parts, including chains and pulleys that should be guarded at all times
    5. Restricted areas during time of plant operation
    6. Loud-sounding horns that signal that the plant is about to begin operations
    7. Equipment backing operations

8. Noise, dust, and no-smoking areas

## 10.7 Field Testing

### 10.7.1 Testing Portland Cement Products

Portland cement-based concrete products become alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns, and affect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Excessive exposure to skin and eyes, especially when the concrete products are mixed with water, can cause caustic burns as severe as third degree. Before handling concrete samples and in accordance with Section 5-1.01, "General," of the *Standard Specifications*, confirm that the contractor provides facilities necessary for the inspection. This includes an ANSI Z358.1-2009-compliant eyewash station, in accordance with 8 CCR 5162, "Emergency Eyewash and Shower Equipment"; and a hand washing station with soap, water, and paper towels, in accordance with 8 CCR 1527, "Washing Facilities, Food Handling, and Temporary Sleeping Quarters." Based on information in a generic portland cement-based concrete product safety data sheet, be prepared for the following first aid measures, if exposed:

- Eyes: Immediately flush eyes thoroughly with water. Continue flushing eyes for at least 15 minutes, including under lids, to remove all particles. Call a physician immediately.
- Skin: Wash skin with cool water and pH-neutral soap or mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment for burns.

### 10.7.2 Testing With Nuclear Gauges

The field lab has unique conditions that require special attention for radioactive sources. Only trained personnel may use specialized equipment.

- Operators of radioactive sources must work within all safety regulations.
- Operators must get training in the proper use, transportation, and storage of nuclear gauge devices.
- Operators must wear film badges when operating gauges or if within 10 feet of the gauges. Instruct all other persons to keep away.
- Use the three-lock system on transportation and storage of devices. Keep transportation or shipping papers within reach of vehicle operators.

- This job often requires the lifting of heavy objects. Use proper lifting methods by balancing the load and lifting with the legs. Do not risk back injury. If necessary, get help.
- Do not, under any circumstances, attempt to repair, modify, or open the nuclear sealed source.
- Operators must notify radiation safety officers and their supervisors in the event of an accident with the gauge.
- In case of a vehicle accident with a vehicle transporting a nuclear gauge, the following emergency procedures must be implemented by the employee:
    1. Move the vehicle off the traveled way to the nearest onsite parking area. The vehicle must not be moved again until a radiation survey has been conducted, if deemed necessary, by responsible authorities.
    2. Move a safe distance from the vehicle and call the 24-hour emergency contact number listed on the shipping papers. Be sure to state that a nuclear gauge is involved. Be prepared to provide the emergency contact with your location. The location should reference the route number, distance, and direction from the nearest cross street, interchange, or landmark feature; for example, Highway 101 in Mendocino County, 2.5 miles north of Redwood Valley Drive. Do not use postmiles for location as emergency responders are not always familiar with county postmile numberings.
    3. Review the "Contact in Case of Nuclear Incident" in the nuclear gauge binder and call the district radiation safety officer or alternates, if necessary.

## 10.8 Respirable Crystalline Silica

### 10.8.1 Background

8 CCR 1532.3, "Occupational Exposures to Respirable Crystalline Silica," superseded 8 CCR 1530.1, "Control of Employee Exposures from Dust-Generating Operations Conducted on Concrete or Masonry Materials." The exposure standards were significantly lowered from a permissible exposure limit of 100 micrograms of respirable crystalline silica per cubic meter of air to 50 micrograms of respirable crystalline silica per cubic meter of air as an 8-hour timeweighted average, and an Action Level requiring medical surveillance of 25 micrograms of respirable crystalline silica per cubic meter of air has been added to the law. This requires Caltrans to implement procedures to protect our employees from potential silica dust exposure.

According to the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA):

- Crystalline silica is an important industrial material found abundantly in the earth's crust. Quartz, the most common form of silica, is a component of sand, stone, rock, concrete, brick, block, and mortar. Materials containing quartz are found in a wide variety of workplaces.
- Silica dust is hazardous when very small, respirable particles are inhaled. These respirable dust particles can penetrate deep into the lungs and cause disabling and sometimes fatal lung diseases, including silicosis and lung cancer, as well as kidney disease.

Occupational exposure to respirable crystalline silica occurs when cutting, sawing, drilling, and crushing of portland cement concrete (PCC), brick, ceramic tiles, rock, and stone products. Occupational exposure also occurs in operations that process or use large quantities of sand, such as foundries and the glass, pottery, and concrete products industries. OSHA estimates that more than 2.3 million workers in the United States are potentially exposed to dust containing crystalline silica. Nearly 90 percent of those workers are employed in the construction industry.

Many contractor operations create exposure to silica dust. These include:

- Bridge demolition—grinding on PCC, both hand and machine
- Sawcutting—horizontal and downward drilling on PCC
- Use of powder-actuated tools, such as Hilti Guns
- Jackhammering or chipping of PCC—sandblasting
- Masonry work—PCC or asphalt production
- Various materials testing methods in our district and field materials labs
- Sweeping after PCC- or asphalt-grinding operations

### 10.8.2 Employee Exposure Procedures

Employees should limit their exposure to contractor operations with the potential to create silica dust by staying upwind at least 50 feet from the operations until the operations with the potential for creating silica dust are stopped and any visible dust has settled as much as environmental conditions allow. Inspection of these activities should be limited to times when the potential for silica dust exposure is minimized as much as possible.

### 10.8.3 Respiratory Protection

Employees should not perform any tasks on the contract that create silica dust. As such, respirator wear will be optional for the employee. If an employee wants to wear a particulate

filtering face piece respirator, or dust mask, they will need to comply with *Safety Manual* Chapter 15, Appendix B, "Caltrans Guidelines for Dust Masks."

Additionally, in accordance with 8 CCR 1532.3, "Occupational Exposures to Respirable Crystalline Silica," the dust mask must meet high efficiency particulate air filter requirements of having a filter that is 99.97 percent efficient in removing particles as small as 0.3 micrometers in diameter and, therefore, a N100 dust mask is required.

### 10.8.4 Special Procedures for Material Testers Working in District or Field Labs

This COSP only applies to field construction personnel. District or field lab staff performing operations that could create silica dust in either district or field labs should refer to the *Laboratory Safety Manual* for specific procedures required for compliance with 8 CCR 1532.3, "Occupational Exposures to Respirable Crystalline Silica."

## 10.9 Lead-Contaminated Soils

Lead enters the body through inhalation or ingestion of lead-containing materials and is not readily absorbed through the skin. The primary concern is exposure through ingestion of contaminated soil. Another concern is that shoes or clothing contaminated with lead-containing soils will provide a source for lead contamination and exposure to others in vehicles, offices, or homes.

Recent testing of soils along some urban freeways has revealed that the soils contain less than 3,000 parts per million of lead, which are considered low levels. An evaluation of the soil contamination levels and expected dust levels indicates that exposure to airborne lead should be well below the Cal/OSHA permissible exposure limit, an average of 50 micrograms of lead per cubic meter of air for 8 hours.

***Eating, drinking, or smoking with hands or faces contaminated with lead-containing materials is the usual way that ingestion occurs.*** If you eat, drink, or use cigarettes, chewing tobacco, or makeup with lead-contaminated soils in them or handle these items with soil-contaminated hands or utensils, you could ingest lead.

Lead exposure can cause serious health effects, including damage to the nervous and blood-forming systems, kidneys, reproductive system, and digestive system. Young children absorb lead much easier than adults and can suffer additional severe and delayed effects, including slow learning and behavioral problems from exposure.

Once in the body, lead is a potent systemic poison that serves no useful function. Some leads are quickly filtered out and excreted, but some remain in the blood and other tissues, often for a long time.

Workers at job sites with elevated lead levels should adopt the following work practices to minimize the potential for contamination and ingestion of lead-contaminated soils:

- Contractors should minimize visible dust in accordance with their authorized lead compliance plan. Employees should stay upwind at least 50 feet from any operations where high levels of lead were identified in the contract and dust is visible. Inform the contractor of the need to comply with the provisions of their authorized lead compliance plan if visible dust is observed.
- Minimize contamination of personal clothing and footwear. Stay clear of operations that generate dust. If contamination cannot be avoided, use protective or disposable clothing and footwear to keep personal clothes clean. To prevent contamination, store or dispose of used protective clothing by leaving it at the job site or placing it in a plastic bag. Clean your shoes before leaving the job site. If contaminated clothing is laundered, wash it separately.
- Prevent soil ingestion by not eating, drinking, or smoking near work operations. Wash your hands and face before eating, drinking, or smoking. Clean your hands, clothing, and shoes before entering vehicles or buildings. Store food and water to avoid exposure to dust.

## 10.10 Yellow Paint Stripe and Markings Removal

Yellow traffic paint, thermoplastic stripe, and permanent marking tape previously used high levels of lead chromate pigments to achieve their yellow color. White markings do not contain lead. Although some of the new yellow paints do not contain lead, all older yellow paints do. When the markings are removed by grinding, scraping, burning, abrasive blasting, or other mechanical methods, the dust created can contain lead.

To minimize the potential for lead exposure, when removing yellow traffic paint marking or stripe by grinding, scraping, burning, abrasive blasting, or other mechanical methods, job sites will adopt the same work practices as those outlined for lead-contaminated soils in the previous section.

## 10.11 Rubberized Hot Mix Asphalt

### 10.11.1 Background

Rubberized hot mix asphalt (RHMA) is composed of petroleum asphalt, ground tires, natural rubbers, and aggregate. In the creation of RHMA, the asphalt and rubber are mixed and heated until the rubber swells and blends with the asphalt. The mixture is applied to the heated aggregate to create RHMA. Dilutent or extender oils are sometimes added to the rubber-asphalt mixture to lower viscosity and improve aggregate coverage. Materials temperature is

important at all stages. Caltrans specifications require a rubber-asphalt reaction temperature of 375 degrees Fahrenheit to 425 degrees Fahrenheit for at least 45 minutes before application to the aggregate. The aggregate is heated to 325 degrees Fahrenheit before mixing. RHMA cannot be heated above 325 degrees Fahrenheit.

RHMA is sticky and requires care in handling. Because of the rubber content, many not familiar with RHMA assume it is too cold and apply heat. This action causes the rubber-asphalt to break down and creates excessive emissions and smoke. Typically, if the RHMA is smoking and stinking, it is too hot. Caltrans specifications call for a maximum windrow and mat temperature of 325 degrees Fahrenheit.

Caltrans collected extensive industrial hygiene air-monitoring data during paving operations using RHMA. Materials monitored included asphalt, volatile organic compounds, polynuclear aromatic hydrocarbons, and cyclohexane extractable particulates. Results showed paving worker exposures to be low for all materials and well below established Cal/OSHA limits for materials with a limit. Unfortunately, local incidents of nausea, irritated throat, headache, and irritation continued to occur on isolated RHMA paving jobs. Most of these incidents have been accompanied by reports of excessive smoke and RHMA temperatures in excess of 325 degrees Fahrenheit.

### 10.11.2 Handling Procedure

Before starting paving work involving RHMA, follow these rules to work with and inspect RHMA paving jobs:

- Minimize personal contact with RHMA and RHMA smoke. Stay upwind and out of the smoke if possible. If irritation or other symptoms occur, move farther away from the smoke. Wear a half-face cartridge respirator with P-100 high efficiency particle air filter or organic vapor combination cartridges (magenta and black). Respirator use must comply with Chapter 15, “Respiratory Protection Program,” of the *Safety Manual*, which requires a medical exam, training, fit testing, clean-shaven wearers, and National Institute for Occupational Safety and Health-approved (NIOSH) equipment and documentation before respirators are issued or worn. Contact the local district safety officer or construction safety coordinator for assistance.
- Use personal protective equipment to minimize contamination of clothing and skin. Wear coveralls if necessary, and wear gloves if handling RHMA. Remove contamination from shoes and clothing when leaving the site and before entering vehicles or offices.
- Prevent ingestion; do not eat, drink, or smoke near the paver. Wash hands before eating, drinking, smoking, and entering vehicles or offices.

## 10.12 Naturally Occurring Asbestos and Asbestos Abatement

### 10.12.1 Background

You may encounter asbestos at a construction site in the following areas or during the following operations:

- Excavations where asbestos-bearing rock outcroppings are at or near the surface.
- Demolition, salvage, alteration, repair, or maintenance of structures where asbestos is present, primarily in sheet rock and mastics.
- Transportation, disposal, storage, and containment involving naturally occurring asbestos or materials containing asbestos, such as bridge shims.
- Pipe and boiler insulation.
- Insulators of electrical conductors, plaster, cement, drywall, and taping compounds.

### 10.12.2 Employee Procedures (Naturally Occurring Asbestos or Demolition of Portland Cement Concrete)

The contract will identify areas with naturally occurring asbestos present. Demolition of portland cement concrete can cause asbestos fibers embedded in the concrete to become airborne. Employees should minimize their exposure to these areas until there is either no visible dust or when the contractor has completed work to a degree to allow inspection with minimal potential exposure.

### 10.12.3 Other Asbestos Exposure

For structures-related work, either on bridges or in structures where the contract has identified asbestos-containing materials, employees must not approach the work area or enter the containment area until the contractor informs the employee that the work is completed and the area is cleaned and ready for inspection.

### 10.12.4 Biological Contaminants

Chapter 22, “Disease Protection,” of the *Safety Manual* discusses Caltrans’ policy on how to reduce risks of contracting a disease through exposure to bodily fluids and environmental conditions. If there is a potential exposure to Valley Fever, supervisors should inform employees about the risk and provide NIOSH-approved respirator protection with particulate filters rated as N95 or higher and follow the protection program described in 8 CCR 5144, “Respiratory Protection.”

## 10.13 Methacrylate, Polyester Concrete, High Friction Surface Treatments, and Multi-Layer Systems Operations

### 10.13.1 Background

Working around methacrylate sealers, polyester concrete, high friction surface treatments, and multi-layer systems requires special precautions.

These operations typically involve the use of styrene-based products, cobalt products, and methyl ethyl ketone peroxide, an organic peroxide.

Respirator use is recommended when using methacrylate products and is required for use with polyester concrete in accordance with Section 15.12, "Recommended Respirators," of the *Safety Manual.*

High friction surface treatments and multi-layer system overlays can use the same styrene-containing binder resins as polyester concrete, and the potential exposure for our personnel is similar. Polyester concrete respirator requirements should be followed.

Training in accordance with Chapter 15, "Respiratory Protection Program," of the *Safety Manual* in proper respirator use, a medical evaluation, and respirator fit testing is required before respirator use. Personnel must not use a respirator until the above requirements are fulfilled and must stay at least 50 feet and upwind from these operations.

### 10.13.2 Handling procedures

Employees must not handle these materials and must stay well away from the contractor's mixing operations.

Incorrect mixing of the products for methacrylate will result in a flash fire.

Before starting work near or inspecting any of the products discussed in Section 10.13.1, "Background," of this COSP, follow these rules:

- Review project specifications and note allowable application temperatures.
- Review the safety data sheets for the products involved.
- Minimize personal contact with and exposure to these products and associated vapors. Wear a respirator as required and stay upwind if possible.
- Use PPE to minimize contact with or exposure to these products and to minimize contamination of clothing, skin, or eyes.
- Prevent ingestion of these products by using good personal hygiene. Do not eat, drink, or smoke near these products.

## 10.14 Valley Fever

### 10.14.1 Background

Caltrans developed guidelines in compliance with 8 CCR 3203, “Injury and Illness Prevention Program”; 8 CCR 5141, “Control of Harmful Exposure to Employees,” and 8 CCR 5144, “Respiratory Protection,” for protection of workers from Valley Fever.

Assembly Bill 203 was approved in 2019 to respond to annual Valley Fever rates in California in highly endemic counties, those with an annual incidence greater than 20 cases per 100,000 persons. Section 6709 of the Labor Code was amended to name the following California counties as highly endemic: Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura. The counties considered highly endemic for Valley Fever will be updated yearly by the California Department of Public Health. Some local health departments provide maps or other more specific information on locations of known regions of Valley Fever.

Valley Fever, or coccidioidomycosis, is a disease caused by a microscopic fungus found in the top 2 to 12 inches of soil in many parts of California. The fungal spores can be released from the soil and become airborne during high winds or from activities that disturb soils such as digging, grading, or driving.

After becoming airborne, the fungal spores may be inhaled and can cause fatigue, cough, fever, shortness of breath, chest pain, headache, weight loss, rash, pain from muscle or joint aches, and symptoms similar to influenza that linger longer than usual.

Some symptoms can last for a month or longer. In rare cases, Valley Fever may also affect the brain, bone, skin, and other organs. Valley Fever must be diagnosed by a physician using either blood tests, chest X-rays, or other diagnostic tests.

While everyone is susceptible to Valley Fever, some individuals are at higher risk of severe illness, including: people 60 or older, those who are pregnant, diabetic, African American, Filipino, or immune-compromised, for example from organ transplant, autoimmune conditions, or taking immunosuppressant medications.

Occupational exposures may occur when Caltrans employees are in the Valley Fever endemic counties and in non-endemic counties on projects where there are high winds or soil disturbing activities, such as clearing and grubbing, excavating, grading, potholing, hauling of soils, filling, trenching, loading or unloading of dirt or bulk material, drilling, adding to or removing material from open storage piles, driving, and backfilling.

To reduce potential exposure to Valley Fever, Caltrans employees should make sure the contractor provides safe and unrestricted access to the work and controls fugitive dust emissions as required in the following sections of the Caltrans *Standard Specifications*:

- Section 5-1.01, “General”
- Section 7-1.04, “Public Safety”
- Section 10-5, “Dust Control”
- Section 10-6, “Watering”
- Section 13-4, “Job Site Management”
- Section 13-5, “Temporary Soil Stabilization”
- Section 14-11.04, “Dust Control”
- Section 18, “Dust Palliatives”

In addition to the Caltrans *Standard Specifications*, the contractor is required to follow all laws and regulations, including requirements to control fugitive dust emissions in local air quality management districts or county air pollution control districts. Since each region may differ, you should examine the project’s special provisions for specific dust control plan requirements that the contractor must follow.

Effective means and methods used by the contractor for control of fugitive dust emissions and eliminating unnecessary fugitive dust exposure will be important ways to minimize potential Valley Fever exposure for Caltrans employees.

### 10.14.2 Engineering Controls

Effective engineering controls by the contractor to minimize visible fugitive dust emissions are important and should include:

- Sufficient watering at regular frequency to control visible dust emissions
- Application of a stabilizer or suppressant
- Construction of wind barriers
- Restricted vehicular access to the area
- Minimized vehicle speed on the project site to control fugitive dust

### 10.14.3 Administrative Controls

In addition to contractor-implemented engineering controls, Caltrans employees can take the following actions:

- Standing upwind of the soil disturbing activity
- Staying inside a vehicle with the windows closed
- When driving in dusty locations, keeping windows closed and putting the vehicle fan in recirculation mode to minimize outside air from entering the vehicle
- Minimizing soil disturbing activities on windy days
- Using personal hygiene including removing potentially contaminated clothing before leaving the job site and washing such clothing before using it again, and washing hands in accordance with Centers for Disease Control and Prevention guidelines for washing hands before taking breaks, before eating, drinking, or smoking, and before leaving the job site
- If feasible, using a vehicle with HEPA filters integral to the vehicle's cabin air conditioning system
- Wet cleaning dusty Caltrans equipment when feasible
- Issuing a stop work order to the contractor if the contractor does not comply with Caltrans specifications and the contractor's dust control plan

### 10.14.4 Personal Protective Equipment

Before personal protective equipment (PPE) is considered, determine if engineering controls by the contractor and administrative controls by the Caltrans onsite representative are effective. If PPE is needed for the work, then Caltrans employees must obtain it before entering the job site.

Use of respirators is voluntary, but use of respirators must follow Caltrans written respiratory protection program policies as discussed in Chapter 15, "Respiratory Protection Program" of the Caltrans *Safety Manual*. At a minimum, if a respirator is used it must be an N95 or better and must be readily available to Caltrans employees. In addition, Caltrans may also have N100 and P100 respirators available for use by its employees. All Caltrans employees who choose to voluntarily wear a respirator must follow the requirements in 8 CCR 5144, Appendix D, "(Mandatory) Information for Employees Using Respirators When Not Required Under the Standard." For each Caltrans employee who chooses to voluntarily wear a respirator, complete the "Voluntary Use Acknowledgement Form" in Appendix F of Chapter 15, "Respiratory Protection Program" of the Caltrans *Safety Manual*.

Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators' limitations.

N95 respirators can be used for more than one day if they are not heavily affected by dust. It is at the discretion of each Caltrans employee to determine if the respirator is too dirty to re-use.

Disposable coveralls are available for Caltrans employees to protect street clothes.

Work footwear and clothing worn by Caltrans employees should be cleaned before getting into vehicles. If heavily soiled, remove the work shoes and clothing and close them in a plastic bag during transit to keep the vehicle clean. Have clean shoes and clothing to wear to leave the job site.

Wash hands before entering vehicles or buildings, and before taking breaks.

### 10.14.5 Mandatory Valley Fever Training

California Labor Code, Section 6709 requires construction employers in counties in which Valley Fever is highly endemic to provide effective Valley Fever awareness and prevention training to employees by May 1, 2020, and annually by that date thereafter, and before an employee begins work that is reasonably anticipated to cause exposure to substantial dust disturbance.

If a previously unlisted county's Valley Fever caseload passes into the highly endemic category, the county is added to the list in the annual report published by the California Department of Public Health, and the mandatory training becomes required the following year.

Although the law only requires training for employees where Valley Fever is highly endemic, the Division of Construction recommends that all Caltrans field employees, whether or not they work in Valley Fever endemic counties, take the Valley Fever Awareness Training.

The training includes all of the following:

- What Valley Fever is and how it is contracted
- High risk areas and types of work and environmental conditions during which the risk of contracting Valley Fever is highest
- Personal factors that may increase the risk of contracting Valley Fever
- Exposure prevention methods
- Importance of early detection, diagnosis, and treatment
- Recognizing common signs and symptoms
- Importance of reporting symptoms and seeking medical attention

- Common treatment and prognosis

This online training developed by Caltrans' Office of Health and Safety (OEHS) can be taken at any time at:

https://hs.onramp.dot.ca.gov/valley-fever-awareness-online-training

Each year, a reminder will be sent to affected employees to take the mandatory annual training before May 1.

Any questions related to Valley Fever can be directed to the Headquarters OEHS Team at the following email address: HQ.Health.Safety@dot.ca.gov.

### 10.14.6 Reporting Valley Fever Illness

Caltrans employees are encouraged to report Valley Fever symptoms to their supervisors promptly so that they can get prompt diagnosis and treatment.

Any Valley Fever diagnosis must be reported to the Cal/OSHA Liaison in the OEHS at HQ.Health.Safety@dot.ca.gov

### 10.14.7 Additional Information

For more information from the California Department of Public Health (CDPH):

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/Pages/Cocci.aspx#

For more information from the Centers for Disease Control (CDC):

https://www.cdc.gov/fungal/diseases/coccidioidomycosis/index.html

## 10.15 Coronavirus (COVID-19)

### 10.15.1 Background

Coronavirus disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. COVID-19 spreads mainly when people are within 6 feet of one another. Respiratory droplets are produced when an infected person speaks, coughs, sings, or sneezes. These droplets may land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. SARS-CoV-2 also may be transferred by touch from a surface or object to the mouth, nose, or eyes. To reduce the risk of contracting of COVID-19, follow the suggested basic prevention measures described in Section 10.15.2 of this document.

### 10.15.2 Basic Prevention Measures

#### Proper Etiquette and Good Hygiene

- Stay home from work if you are sick with respiratory symptoms such as fever,cough, sore throat, fatigue, muscle or body aches, headache, new loss of taste or smell, congestion or runny nose, nausea or vomiting, or diarrhea.
- Frequently and thoroughly wash your hands with soap and running water for at least 20 seconds. If soap and running water are not immediately available, use alcohol-based hand rubs containing at least 60 percent alcohol.
- Avoid touching your eyes, nose and mouth with unwashed hands.
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
- Avoid sharing food and drinks.
- Utilize water bottles instead of a shared water cooler to avoid touching a shared spigot.
- Discourage workers from using other workers' phones, computers, keyboards, devices, desks, offices, supplies, other work tools, and personal protective equipment when possible. Avoid touching with bare hands such surfaces restroom doorknobs or stair railings.
- Maintain regular housekeeping practices, including routine cleaning and disinfecting of frequently touched objects, surfaces, equipment, and other elements of the work environment. Refer to CDC's guidelines for cleaning and disinfecting at:

  https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/disinfecting-your-home.html
- Conduct daily self-evaluations to monitor your health by following the instructions from OEHS's intranet site at:

  https://hs.onramp.dot.ca.gov/downloads/hs/files/rev3-self-eval-checklist.pdf
- Follow CDC recommendations about wearing a cloth face covering in public settings where other social distancing measures are difficult to maintain. For more information, see "How to Wear and Safely Take Off a Face Covering" at:

  https://hs.onramp.dot.ca.gov/downloads/hs/files/CDC_cloth-face-covering.pdf
- Please be advised that the CDC does not recommend wearing surgical masks or N95 respirators as this equipment should be reserved for healthcare workers. However, employees should use recommended respirators or must use required respirators for

respirator protections in certain operations in accordance with Chapter 15, "Respiratory Protection Program," of the Caltrans' *Safety Manual*.

- Properly disinfect frequently touched points of your state vehicle. Refer to the guidelines at:

  https://hs.onramp.dot.ca.gov/downloads/hs/files/Caltrans%20Fleet%20Vehicle_Equipment%20Disinfecting%2003-30-2020.pdf

**Flexible Worksites / Social Distancing / Minimize Personal Interactions**

- Teleworking and flexible work hours may help minimize face-to-face contact among employees and to maintain the recommended 6-foot clear space for employees sharing office spaces.
- Stay 6 feet or farther from contractor personnel when conducting field inspection activities, if possible.
- When meeting in person, use meeting spaces that allow 6-foot clear space between all meeting attendees. When feasible, use conference calls or video conferences.

### 10.15.3 COVID-19 Information and Resources

As the coronavirus pandemic evolves, Caltrans' COVID-19 taskforce monitors expert guidance from CDC, CDPH, and California Department of Human Resources and prepares current guidance. Additional best practices may be needed as COVID-19 outbreak conditions change, including any new information about the virus, its transmission, and effects. Refer to Caltrans' main web page for COVID-19 information and resources at:

https://hs.onramp.dot.ca.gov/covid-19-information-and-resources

For additional guidance regarding COVID-19 see:

- How to Protect Yourself:

  https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html

- Guidance on Preparing Workplaces For COVID-19:

  https://www.osha.gov/Publications/OSHA3990.pdf

- Interim Guidance for Businesses and Employers to Plan and Respond to Coronavirus Disease 2019 (COVID-19):

  https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html

- COVID-19 General Checklist for Construction Employers:

  https://files.covid19.ca.gov/pdf/checklist-construction.pdf

- OEHS's intranet site lists training and educational resources at:

  https://hs.onramp.dot.ca.gov/covid-19-education-training

### 10.15.4 Protocols

#### Safety Protocols on Projects

Resident engineers must inform the contractor in writing of the Department's updated safety protocols for its Caltrans project staff and work site visitors. Refer to Appendix 4, for a sample letter to the contractor. Also, request a copy of any revisions the contractor has made to their Injury and Illness Prevention Plan as it relates to COVID-19.

#### COVID-19 Exposure Notice Protocol

When an employee tests positive for COVID-19, follow Appendix 5, "Caltrans Office of Health and Safety Checklist," to report positive COVID-19 cases and to obtain information about any close co-worker contacts within the past 14 days. A close contact is defined as anyone who was within 6 feet of a COVID-19 positive employee for 15 minutes or more.

CDC guidance recommends that employees who had close contact with a COVID-19 positive person should self-quarantine at home for 14 days from the last exposure to the COVID-19 positive person. The CDC also recommends that employees contact their health care provider for additional guidance based on individual circumstances. Employees should work with their manager or supervisor on telework and leave options.

- **Field Employees** –Field employees are considered critical infrastructure employees, according to California Governor Gavin Newsom's Executive Order N-33-20. To assure continuity of operations of essential functions, CDC advises that critical infrastructure workers may be permitted to continue work following potential exposure to COVID-19, provided they remain asymptomatic and additional precautions are implemented to protect them and the community. The CDC guidelines are posted at:

  https://www.cdc.gov/coronavirus/2019-ncov/community/critical-workers/implementing-safety-practices.html

- **Office Employees** – Adhere to the guidance from CalHR which follows CDC guidance and ask close contacts to self-quarantine for 14 days, and during this time telework if possible. Employees should work with their manager or supervisor on telework and leave options, if feasible.

The Flow Chart for COVID-19 Guidance offers an overview of a close contact notification protocol as well as guidance for when an employee is exposed to someone who is confirmed positive for COVID-19. As a reminder, maintaining employee confidentiality must remain a priority throughout the reporting process. The Flow Chart for COVID-19 Guidance is posted on the OEHS' intranet site at:

https://hs.onramp.dot.ca.gov/downloads/hs/documenlib/Flow%20Chart%20for%20COVID-19%20Guidance.pdf

# *APPENDIXES*

## Appendix 1— Respirators in Various Caltrans Construction Operations

Employees must comply with Section 15.04, "Respirator Selection," of the *Safety Manual* for the following:

Asbestos—Asbestos removal or disturbance requires special training and equipment. A specific work plan or code of safe practices (COSP) is required, and the plan will indicate what type of respirator is required. Dust masks may not be used for asbestos protection.

Asphalt paving—Respirator use is not required, but a cartridge respirator with organic vapor (black) or organic vapor-P100 combination cartridges will provide adequate protection from the offensive odors and fumes. Dust masks may not be used.

Earthwork and soil disturbing activities—Respirator uses of N95 respirators or better dust masks are voluntary but recommended for earthwork and soil disturbing activities that generate dust, including, but not limited to, clearing and grubbing, excavating, grading, potholing, hauling of soils, trenching, loading or unloading of dirt or bulk material, adding to or removing of material from open storage piles, or backfilling, as described in the Section 10.14, "Valley Fever," of this manual. Supplies of N100 and P100 respirators are available in District warehouses.

Galvanized metals—Welding or cutting galvanized metals may release toxic fumes. Follow the appropriate COSP. Use a cartridge respirator with N or P100 filters if welding or cutting for more than 30 minutes continuously. For less than 30 minutes, no respirator is required, but an N95 dust mask may be used.

High friction surface treatments—Employees working within 50 feet of high friction surface treatment construction projects need to wear cartridge respirators with organic vapor (black) or organic vapor-P100 combination cartridges. Dust masks may not be used.

Lead—Respirator selection for operations that disturb lead-containing paints or materials will follow the lead compliance plan for that particular operation. Any operation that disturbs lead-containing materials requires special lead training and protective equipment. Dust masks may not be used for protection from lead.

Methacrylate road or bridge sealers—Respirator use is not required, but a cartridge respirator with organic vapor (black) or organic vapor-P100 combination cartridges may be used. These materials sometimes have an offensive odor. Dust masks may not be used.

Multi-layer system—Employees working within 50 feet of multi-layer system construction projects need to wear cartridge respirators with organic vapor (black) or organic vapor-P100 combination cartridges. Dust masks may not be used.

Pesticides—A cartridge respirator with P100-organic vapor cartridges is required. Dust masks must not be used for pesticides. Follow the pest control advisor's use recommendations. A respirator is required for mixing or loading loose powders.

Polyester concrete—Employees working within 50 feet of polyester concrete construction projects need to wear cartridge respirators with organic vapor (black) or organic vapor-P100 combination cartridges. Dust masks may not be used.

Respirable crystalline silica dust—Employees at risk of exceeding the permissible exposure limit for respirable crystalline silica dust must refer to 8 CCR 5204, "Occupational Exposures to Respirable Crystalline Silica," in addition to the regulations cited in these guidelines. Respiratory equipment must have the appropriate protection factor to protect employees from exposure until proper engineering and administrative controls can be implemented. See Appendix E, Chapter 15, "Respiratory Protection Program," of the Caltrans *Safety Manual* for more information.

Sandblasting—A cartridge respirator with N or P100 filters must be used for sandblasting less than 1 hour per shift if proper protective equipment for the face, head, and eyes is also worn. For work longer than 1 hour, a supplied-air-sandblasting hood, NIOSH type CE, must be used; the air-supply system must comply with the Airline Supplied Code of Safe Operating Practices CSOP in Chapter 15, Appendix C of the Caltrans *Safety Manual.* Powered air purifying respirator helmets or hoods are not NIOSH-approved for sandblasting and may not be used.

Spray painting—Respirator use is required for solvent-based paints but not for latex-based paints. Use a cartridge respirator with P100-organic vapor cartridges. Dust masks are not appropriate for spray painting.

Treated wood—Respirator use is not required during sawing and drilling on treated wood, but a cartridge respirator with N or P100 cartridges may be worn. An N95 dust mask may also be worn.

Wildfire Support—When providing support during a wildfire, such as traffic control, or tree work, respirator use is voluntary when the Air Quality Index for particulate matter of 2.5 micrometers or less reaches 151 or higher. Respirator use is required when the index is greater than 500 for particulate matter of 2.5 microns or less. For more information, see Appendix D, Chapter 15, "Respiratory Protection Program," of the Caltrans *Safety Manual.*

## Appendix 2— Sample Confined Space Entry Checklist (HS-0040)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

**CONFINED SPACE ENTRY CHECKLIST**

HS-0040 (REV. 5/2013)

**FORM FOR ONE SHIFT ONLY. NEW FORM MUST BE COMPLETED FOR EACH SUBSEQUENT SHIFT.**

Page 1 of 2

*This form must be readily available at the confined space while the work is in progress. After work is completed, give to your supervisor for retention.*

DESCRIBE WORK TO BE DONE

DATE | TIME FROM | TO

LOCATION OF CONFINED SPACE

☐ Pumping Plant ☐ Culvert
☐ Bridge Cell ☐ Other

LOCATION OF WORK WITHIN CONFINED SPACE (DRAW SKETCH BELOW, ESTIMATE AND SHOW DISTANCE AND DIRECTION FROM WORK ACCESS)

NOTE: If more space is needed use back of form.

*CHECKLIST BELOW MUST BE COMPLETED BEFORE ENTRY*

NOTE: THE RESPONSIBLE PERSON IN CHARGE INITIALS ITEMS 1-4 AND 6-8. ENTER SPACE ONLY AFTER THE PROCEDURES LISTED BELOW HAVE BEEN COMPLETED.

INITIAL

1. Review *Code of Safe Practices* for entry and work in confined spaces.
2. Review emergency/rescue procedures and list contact information.
3. Notify nearest Traffic Management Center or Responsible Person and list contact information.
4. Complete at least 2 tests of atmospheric conditions in the confined space using a four gas meter. Additional testing may be necessary depending on the depth and configuration of the space.
5. Testing of atmosphere conditions -- pre-entry

| SIGNATURE OF TESTER | TIME | LOCATION OF SAMPLED AIR | METER READING | | | | |
|---|---|---|---|---|---|---|---|
| | | | OXYGEN (%) | COMBUSTIBLES (%Lower Explosive Limit - LEL) | CARBON MONOXIDE | HYDROGEN SULFIDE | OTHER |
| PRINT NAME | | | | | | | |
| | | | | | | | |
| SIGNATURE | | | | | | | |
| | | | | | | | |

NOTE: If more lines are needed use back of form.

6. Suitable lighting provided in work area.
7. Effective means of providing continuous communication between the attendant and entrants.
8. Assure that atmosphere will be tested during work within confined space. NOTE: If atmosphere becomes hazardous, all workers shall STOP WORK and LEAVE CONFINED SPACE IMMEDIATELY - DO NOT RE-ENTER; contact Responsible Person in Charge.

AUTHORIZED PERSONS

| | PRINT NAME | INITIAL | PRINT NAME | INITIAL |
|---|---|---|---|---|
| RESPONSIBLE PERSON IN CHARGE | | | | |
| ATTENDANT | | | | |
| ALTERNATE ATTENDANT | | | | |
| ENTRANTS | | | | |
| | | | | |
| | | | | |

I have determined that the above procedures have been completed and it is safe to enter and work in this confined space.

RESPONSIBLE PERSON IN CHARGE SIGNATURE | DATE

**ADA Notice** For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 654-6410, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

## Appendix 2— Sample Confined Space Entry Checklist (HS-0040) (cont.)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

**CONFINED SPACE ENTRY CHECKLIST**

HS-0040 (REV. 5/2013)

Page 2 of 2

LOCATION OF WORK WITHIN CONFINED SPACE (DRAW SKETCH BELOW, ESTIMATE AND SHOW DISTANCE AND DIRECTION FROM WORK ACCESS)(CONTINUED)

Note: any new hazards or changes that need to be added to the confined space index ☐ Form sent to Safety Officer for change to the index.

TESTING OF ATMOSPHERE CONDITIONS – PRE ENTRY (CONTINUED)

| TIME | LOCATION OF SAMPLED AIR | METER READING | | | | |
|---|---|---|---|---|---|---|
| | | OXYGEN (%) | COMBUSTIBLES (%Lower Explosive Limit - LEL) | CARBON MONOXIDE | HYDROGEN SULFIDE | OTHER |
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*FOR ONGOING TESTING DURING OCCUPATION OF ENCLOSED SPACE*

TESTING OF ATMOSPHERE CONDITIONS – POST ENTRY

| TIME | LOCATION OF SAMPLED AIR | METER READING | | | | |
|---|---|---|---|---|---|---|
| | | OXYGEN (%) | COMBUSTIBLES (%Lower Explosive Limit - LEL) | CARBON MONOXIDE | HYDROGEN SULFIDE | OTHER |
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ACCEPTABLE ENTRY CONDITIONS (atmospheric):

| | |
|---|---|
| oxygen level | 19.5% - 23.5% |
| Combustible Gas / Vapor | < 10% LEL |
| Carbon Monoxide | < 25 ppm |
| Hydrogen Sulfide | < 10 ppm |

## Appendix 3—Project Team Acknowledgment and Signature Sheet

The following employees have read, understood, and will abide by the Division of Construction *Code of Safe Practices* for the project:

DISTRICT - EA: _____

**Construction Engineer/Senior Resident Engineer**

Print Name _____

Signature _____

**Project Resident Engineer**

Print Name _____

Signature _____

**PRINT FULL NAME, SIGN, AND DATE**

Other Caltrans Staff

_____

_____

_____

_____

_____

_____

_____

_____

_____

File original in Category 6
cc to Construction Safety

## Appendix 4—Sample Letter to the Contractor During the COVID-19 Pandemic

STATE OF CALIFORNIA – CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

**DEPARTMENT OF TRANSPORATION**
DIVISION OF CONSTRUCTION
*[Deputy District/Region Director of Construction Address]*
*[City, CA ZIP]*
[PHONE *(Area Code) xxx-xxxx]*
[FAX *(Area Code) xxx-xxxx]*
TTY 711
www.dot.ca.gov

*Making Conservation a California Way of Life.*

Date: [Month dd, yyyy]

[Contractor's Name]
[Contractor's Representative's Title]
[Address]
[City, State ZIP]
[Contract No. xx-xxxxxx]

Subject: **CODE OF SAFE PRACTICES COVID-19 SAFETY PROTOCOLS**

Dear [contractor name]:

In an effort to prevent the spread of COVID-19 (coronavirus), the Caltrans staff is adding several safety protocols into the Caltrans *Code of Safe Practices* (COSP). The safety protocols are recommended by the Centers for Disease Control and Prevention and the Occupational Safety and Health Administration.

Caltrans employees are directed to stay home when ill. Staff must adhere to hygiene practices, including minimizing personal contact when practical, and observing the recommended 6-foot social distancing for personal interactions. We request that you inform your workers and staff of these workplace changes to our COSP. We also request that meetings be limited to essential personnel and provide the 6-foot clear space, when practical. The use of online and teleconferences is recommended to help reduce personal interactions.

We recognize that you also may have updated or implemented new worker protocols into your business practices. If you have recently updated your COSP or Injury and Illness Prevention Plan, please provide the latest copy to us. Thank you for adhering to these important safety changes and partnering to prevent possible illness for all project workers.

For more information on safety protocols, see:

https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html

and

https://www.osha.gov/Publications/OSHA3990.pdf

*"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"*

SAMPLE

## Appendix 4—Sample Letter to the Contractor During the COVID-19 Pandemic (cont.)

Contractor's Representative's Name
Month date, year
Page 2

Sincerely,

[Resident Engineer]

SAMPLE

*"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"*

## Appendix 5— Caltrans Office of Health and Safety Checklist

### Supervisor Checklist for Positive COVID-19 Case Reporting

Revision Date: 08/14/2020
NOTE: Changes from the last version are notated in **bolded red.**

If you have an employee that has tested positive for COVID-19, please work with your District Deputy Director of Administration (DDDA) or Program Administrators (PA) to adhere to the following steps:

1. Gather the following information for reporting; the Office of Employee Health and Safety will ask for the following information:
   - ☐ Employee Name (cannot disclose via email/text message/other correspondence)
   - ☐ Employee date of birth
   - ☐ Employee home address
   - ☐ Employee phone number
   - ☐ Classification
   - ☐ Primary work duties
   - ☐ Physical work location name and address, including zip code
   - ☐ Last physical day at work
   - ☐ List of any facilities, yards, or common areas the employee visited (from at least two days prior to symptom onset or within the last 7 days, if asymptomatic)
   - ☐ List of close contacts (any person within 6 feet for more than 15 minutes)
     - i. Were employee and close contacts wearing face coverings?
   - ☐ Current health status and details (i.e.: positive from public health or doctor, quarantine order from public health or doctor, etc.)
     - i. Symptoms and date of onset
     - ii. Date of last fever (measured or subjective)
   - ☐ Date employee tested
   - ☐ Date employee received positive result
   - ☐ Bargaining units at location (if unsure, work with your labor relations officer)
   - ☐ Leave status (i.e. using ATO, personal leave credits, teleworking, etc.)

2. Call the assigned COVID-19 Reporting Liaison to report on the information above:

| District | Liaison | Phone |
|---|---|---|
| HQ | Mark Dinger | 916-591-6223 |
| 1, 2, 3, 4 | Kevin Goddard | 916-639-5722 |
| 5, 6, 9, 10 | Rachel Archuleta | 916-639-5897 |
| 7 | Jennifer Valeros | 916-708-8664 |
| 8, 11, 12 | Cecilia Gutierrez | 916-639-5754 |

3. If the employee tests positive for COVID-19 and has physically reported to work within 14 days of the diagnosis, Workers' Compensation information must be provided to the employee. Submit forms e3301 and SCIF 3067 to the Workers' Compensation Unit. Complete form PM-0067 and submit to the safety office.

4. An email/memo will need to be prepared by the District or Division to inform **all employees who work at the impacted facility. A separate notice will need to be sent to close contacts (any person that was within 6 feet of the COVID-19 positive employee for more than 15 minutes)**.** The appropriate CalHR approved email notification template will be sent to you upon reporting to OEHS, if applicable. Please use this template only; do not create your own message.

   **** *Field Employees* are considered critical workers. Caltrans will follow the CDC's Interim Guidance for Implementing Safety Practices for Critical Infrastructure Workers Who May Have**

## Appendix 5— Office of Health and Safety Checklist (cont.)

### Supervisor Checklist for Positive COVID-19 Case Reporting

Revision Date: 08/14/2020
NOTE: Changes from the last version are notated in **bolded red.**

**Had Exposure to a Person with Suspected or Confirmed COVID-19. *Office Workers* are to adhere to the guidance laid out in the most recent communication from CalHR and CDC which directs close contacts to self-quarantine and telework for 14 days. View the Flow Chart for COVID-19 Guidance for more information.**

NOTE: It is important to keep the employee's anonymity during any communication to the fact of potential exposure even if an employee who tests positive informs their coworkers on their own. Managers and supervisors are not to further relay that information, beyond what is standard practice per the memo notification process. If Districts and Programs get contacted by the union about COVID-19, please work with HQ Labor Relations staff for a response.

5. The DDDA or PA will email the prepared notification for approval to COVID19Taskforce@dot.ca.gov (CC your assigned liaison).

6. Once approval is received, send the email to all employees at the work location.

7. Work with OEHS and Headquarters Administration and adhere to the direction of local public health authorities to close or provide additional cleaning to the facility. If you are in a building operated by the Department of General Services, submit a request for cleaning and notify the Division of Business Operations via email at Business.Operations@dot.ca.gov. If your building is not supported by DGS, please follow CDC guidelines for cleaning and disinfecting your facility. If an emergency contract is needed, work with DPAC for execution.

   Additional guidance for cleaning and disinfecting your building or facility if someone is sick:
   - ☐ Close off areas used by the person who is sick.
     - You do not necessarily need to close operations, if they can close off affected areas.
     - This should **not** be done by employees to maintain the confidentiality of the COVID-positive person. This should be done by DGS or appropriate supervisor.
   - ☐ Open outside doors and windows to increase air circulation in the area.
   - ☐ Wait 24 hours before you clean or disinfect. If 24 hours is not feasible, wait as long as possible.
   - ☐ Clean and disinfect all areas used by the person who is sick, such as offices, bathrooms, common areas, shared electronic equipment like tablets, touch screens, keyboards, remote controls, etc.
   - ☐ Vacuum the space if needed. Use vacuum equipped with high-efficiency particular air (HEPA) filter, if available.
     - Do not vacuum a room or space that has people in it. Wait until the room or space is empty to vacuum, such as at night, for common spaces, or during the day for private rooms.
     - Consider temporarily turning off room fans and the central HVAC system that services the room or space, so that particles that escape from vacuuming will not circulate throughout the facility.
   - ☐ Once area has been appropriately disinfected, it can be opened for use.
     - Workers without close contact with the person who is sick can return to work immediately after disinfection.
   - ☐ If more than 7 days since the person who is sick visited or used the facility, additional cleaning and disinfection is not necessary.

## Appendix 5— Office of Employee Health and Safety (cont.)

### Supervisor Checklist for Positive COVID-19 Case Reporting

Revision Date: 08/14/2020
NOTE: Changes from the last version are notated in bolded red.

- Continue routing cleaning and disinfection. This includes everyday practices that businesses and communities normally use to maintain a healthy environment.

8. If you receive a media inquiry, coordinate with your department communications leads, Public Information Office and/or External Affairs Office and they will work on any public-facing communications.

9. Track the self-disclosed positive coronavirus employees work status and report accordingly. If the employee is well enough to telework, track accordingly. When the employees work status changes, please notify OEHS immediately. Remember, employees are not required to disclose why they are calling-in sick and we cannot ask.

10. According to the CDC, an employee is not contagious if the following conditions are met. This guidance can be shared with the employee so that they are able to determine whether or not they are ready to return to work.

**If the employee *had symptoms*, they are considered ready to return to work when:**

- ☐ The employee has not had a fever for 24 hours without the use of fever-reducing medications; **and**,
- ☐ The employee has had an improvement in symptoms; **and**,
- ☐ It has been 10 days since symptoms first appeared.

**If the employee *never had symptoms*, they are considered ready to return to work when:**

- ☐ It has been 10 days since the employee took the COVID test.