State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

To: DISTRICT DIRECTORS
DEPUTY DIRECTORS
DIVISION CHIEFS

Date: February 20, 2026

From: PAUL CHUNG
Chief (Acting), Paul Chung
Division of Safety Programs

ERIC SOUZA
Chief,
Division of Design

JEREMY PETERSON-SELF
Chief (Acting),
Division of Construction

DUPER TONG Duper Tong
Chief,
Division of Traffic Operations

DEE LAM
Chief,
Division of Local Assistance

Subject: **DESIGN INFORMATION BULLETIN (DIB) 91 GUIDELINES ON THE USE OF POSITIVE WORK ZONE PROTECTION (PWP) & MITIGATION MEASURES**

Design Information Bulletin 91, "Guidelines on the Use of Positive Work zone Protection (PWP) & Mitigation Measures", has been updated to version 91-02 and is available on the Division of Design's "Design Information Bulletin (DIBs)" website <https://dot.ca.gov/programs/design/design-information-bulletins-dibs>.

The intent of DIB 91-02 is to reduce preventable injuries and fatalities to workers and drivers by requiring the use of approved (PWP) devices or mitigation measures in public works projects on the State Highway System.

This revision incorporates updated federal requirements from 23 Code of Federal Regulations (CFR) Part 630 Subpart K (Temporary Traffic Control Devices), which expands the use of positive protection devices and directs Federal aid funded agencies to develop procedures and guidance for the systematic consideration and management of work zone impacts and exposure to reduce the risks of fatal and injury crashes using PWP devices.

The effective date of this DIB is as specified in the IMPLEMENTATION section of this memorandum.

BACKGROUND

This DIB provides guidance for applying PWP and other mitigation measures on projects within the State Highway System. The guidance implements requirements from the Streets and Highways Code Section 92.1 (Assembly Bill 759 - Bigelow) and the Federal Highway Administration (FHWA) regulations in 23 CFR Part 630, Subparts J and K, which address work zone safety, mobility, and temporary traffic control.

Under these regulations, positive protection refers to devices that physically separate workers from traffic by containing and/or redirecting errant vehicles. These devices must meet current industry crashworthiness evaluation criteria.

This update to DIB 91 incorporates the revised federal requirements in 23 CFR Part 630 Subpart K, expands the consideration and use of positive protection devices, and strengthens consistency to further reduce work zone injuries and fatalities.

RESPONSIBILITY

The project engineer is responsible for documenting the selected PWP, mitigation measures, and exceptions if applicable on the Form CEM-1302 "POSITIVE WORK ZONE PROTECTION DETERMINATION" for each work zone location within the project limits, as well as filing the approved copy in the project history file.

The resident engineer is responsible for documenting revisions, additions, or exceptions for PWP or mitigation measures that occur during construction on Form CEM-1303 "POSITIVE WORK ZONE PROTECTION SUPPLEMENT". Collaboration with district design and district traffic operations is encouraged.

KEY CONCEPTS

- PWP devices that are consistent with FHWA's definition of positive barrier are described along with picture examples, typical uses, relative costs, benefits, and other considerations.

- PWP evaluation steps, mitigation measures, and consideration of other road users are provided.

- PWP engineering analysis and documentation process is included with a detailed explanation of each analysis step and corresponding risk factor.

- Reference to the Work Zone Traffic Control Resources website is provided for further information on the PWP devices and mitigation measures: <https://dot.ca.gov/programs/safety-programs/workzones>

- Reference to the Caltrans Plans Preparation Manual is provided for examples of how to indicate specified PWP devices on traffic handling and stage construction plan sheets.

IMPLEMENTATION

All projects meeting Plans, Specifications & Estimate (PS&E) delivery on or after February 20, 2026, shall comply with Highway Design Manual (HDM) Index 82.5 and are required to include a completed Form CEM-1302. Form CEM-1302 will be included on the RTL Checklist Form. Any modification to the completed and approved Form CEM-1302 during construction must be justified and approved on supplemental Form CEM-1303 and filed in the project file Category 13 Signs and Striping. Forms CEM-1302 and CEM-1303 are available in Appendix A of the DIB and the Division of Construction "Forms" website <https://dot.ca.gov/programs/construction/forms>.

Please contact Ranjeet Bagha, Division of Construction at (916) 516-2063 or George Tokmakov, Division of Design at (916) 952-9012 for DIB guidance questions. Project-specific applicability and questions should be referred to the Division of Design, Project Delivery Coordinators.

Attachment

DIB 91-02 Guidelines on the Use of Positive Work Zone Protection (PWP) & Mitigation Measures

c: Steve Pyburn, Design Program Manager, Federal Highway Administration California Division
Pyo Hong, Acting Deputy Division Chief, Division of Design
Gulalai Ahad, Acting Chief, Office of Standards & Procedures, Division of Design
George Tokmakov, Office of Standards & Procedures, Division of Design
Andrew Brandt, Acting Deputy Division Chief, Division of Construction
Veera Nanugonda, Chief, Office of Construction Safety and Insurance, Division of Construction
Ranjeet Bagha, Office of Construction Safety and Insurance, Division of Construction
Devinder Sandhu, Chief, Office of Encroachment & Outdoor Advertising Permits, Division of Traffic Operations
Shaila Chowdhury, Deputy Division Chief, Transportation Safety, Division of Safety Programs
Mark Samuelson, Deputy Division Chief, Division of Local Assistance
Kitae Nam, Office of Preliminary Engineering Oversight, Division of Local Assistance

DESIGN INFORMATION BULLETIN NUMBER 91-02

California Department of Transportation

Division of Design

Guidelines on the Use of Positive Work Zone Protection (PWP) & Mitigation Measures

APPROVED BY:

Paul Chung

Paul Chung
Chief (Acting), Division of Safety Programs

Eric Souza
Chief, Division of Design

Jeremy Peterson-Self
Chief (Acting), Division of Construction

Duper Tong

Duper Tong
Chief, Division of Traffic Operations

Dee Lam
Chief, Division of Local Assistance

February 20, 2026

Table of Contents

1.0 Introduction

This Design Information Bulletin (DIB) provides guidance for the application of Positive Work zone Protection (PWP) and mitigation measures in projects on the State Highway System based on requirements of the Streets and Highways Code Section 92.1 (Assembly Bill 759 – Bigelow and Assembly Bill 752 – Rubio) and the Code of Federal Regulations (CFR) 23 CFR Chapter 1, Federal Highway Administration Part 630 Subpart K. The intent is to use approved PWP devices or other mitigation measures in public works projects on the State Highway System to isolate workers and road users of work zones from traffic.

Refer to Maintenance Manual, Chapter 8 for work zone protection procedures for maintenance work as well as the Maintenance Code of Safe Operating Practices.

This document provides guidelines for the use of PWP. This DIB should be used along with engineering judgment to determine application and documentation of PWP during project development activities, encroachment permit activities and related construction work zone activities. Consideration for road user safety, worker and responder safety, and the efficiency of road user flow is an integral element of every Temporary Traffic Control (TTC) zone, from planning through completion. A concurrent objective of the TTC is the efficient construction and maintenance of the highway and the efficient resolution of traffic incidents. No one set of TTC strategies can satisfy all conditions for a given project or incident. At the same time, defining details that would be adequate to cover all applications is not practical. The PWP selected for each situation depends on type of highway, road user conditions, duration of operation, physical constraints, and the nearness of the work space or incident management activity to road users.

These guidelines are not a stand-alone document and are intended to be used in conjunction with other traffic control standards and resources including the following:

- California Manual on Uniform Traffic Control Devices (CA MUTCD)
- Caltrans Traffic Safety Systems Manual
- Caltrans Standard Plans and Standard Specifications
- Caltrans Traffic Management Plan guidelines
- Caltrans Highway Design Manual (HDM)
- Caltrans Construction Manual
- Caltrans Maintenance Manual
- Caltrans Plans Preparation Manual (PPM)
- Caltrans Traffic Operations Policy Directives (TOPDs)
- Caltrans Construction Procedure Directives (CPDs)
- Caltrans Encroachment Permits Manual
- Caltrans Local Assistance Procedures Manual (LAPM)
- AASHTO, Roadside Design Guide (RDG)
- AASHTO, Manual for Assessing Safety Hardware (MASH)

The standards, procedures, and requirements established and discussed herein and referenced above are for the information and guidance of the officers and employees of the California Department of Transportation (Caltrans). This document is not a textbook or a substitute for engineering knowledge, experience, or judgment. Statements as to the duties and responsibilities of any given position or classification of officers or employees mentioned herein refer solely to duties or responsibilities owed by those in such position or classification to their supervisors.

This document is not intended as, nor does it establish a legal standard or legal duty. It is also not intended that any standard of conduct or duty toward the public shall be created or imposed by the publication of this document.

2.0 Government Requirements

2.1 Streets and Highways Code Section 92.1

The Streets and Highways Code Section 92.1 (Assembly Bill 759 – Bigelow approved by the Governor on October 8, 2019) requires Caltrans to specify use of appropriate positive protection measures.

Streets and Highways Code Section 92.1 states:

> *(a) …to specify the appropriate use of positive protection measures, including, but not limited to, automated flagger assistance devices, buffer lanes, impact attenuator vehicle, and temporary barriers, with the goal of isolating workers or work zones from traffic.*
>
> *(b) Where the department's updated guidance allows, but does not require, use of a safety device, the department shall provide compensation for the optional safety device when requested by a contractor on a public works project of the department.*

2.2 Federal Regulations

Subpart K of Title 23 CFR 630.1106 requires consideration of road user and worker safety on Federal-aid projects on all agency's policies and procedures. Additionally, Subpart K of Title 23 CFR 630.1108 requires use of positive protection devices in high speed work zones with no means of worker escape unless an engineering study determines otherwise, and consideration for use in other work zones on all Federal-aid highway projects.

Federal regulation states:

> *630.1106 (a) Each agency's policy and processes, procedures, or guidance for the systematic consideration and management of work zone impacts, to be established in accordance with 23 CFR 630.1006, shall include the consideration and management of road user and worker safety on Federal-aid highway projects. These processes, procedures, and/or guidance, to be developed in cooperation with the Federal Highway Administration (FHWA), shall address the use of Positive Protection Devices to prevent the intrusion of motorized traffic into*

the work space and other potentially hazardous areas in the work zone; Exposure Control Measures to avoid or minimize worker exposure to motorized traffic and road user exposure to work activities; Other Traffic Control Measures including uniformed law enforcement officers to minimize work zone crashes; and the safe entry/exit of work vehicles onto/from the travel lanes. Each of these strategies should be used to the extent that they are possible, practical, and adequate to manage work zone exposure and reduce the risks of crashes resulting in fatalities or injuries to workers and road users.

630.1108 (a) Positive protection devices. At a minimum, agencies shall use positive protection devices in work zones with high anticipated operating speeds that provide workers no means of escape from motorized traffic intruding into the workspace unless an engineering study determines otherwise. Positive protection devices shall be considered in other situations that place workers at increased risk from motorized traffic, and where positive protection devices offer the highest potential for increased safety for workers and road users, such as:

(1) Work zones that provide workers no means of escape from motorized traffic (e.g., tunnels, bridges, etc.);

(2) Long-duration work zones (e.g., two weeks or more) resulting in substantial worker exposure to motorized traffic;

(3) Projects with high anticipated operating speeds (e.g., 45 mph or greater), especially when combined with high traffic volumes;

(4) Work operations that place workers close (e.g., within one lane width) to travel lanes open to traffic; and

(5) Roadside hazards, such as drop-offs or unfinished bridge decks, that will remain in place overnight or longer.

3.0 Definitions

Escape route: an unobstructed route by which a worker in a temporary traffic control zone can rapidly move to a safe location.

High speed: a posted speed greater than 45 miles per hour (mph).

PWP: in these guidelines, PWP is defined as devices that contain and/or redirect vehicles and meet applicable industry crashworthiness evaluation criteria. Minimum crashworthiness evaluation criteria must comply with the Caltrans Traffic Safety Systems Manual.

PWP device bid items covered in this guidance include Temporary Concrete Barriers, Temporary Steel Barriers, Moveable Barrier System, Mobile Barrier System, and Stationary Impact Attenuator Vehicle. See Section 5.0 for further information regarding PWP device examples, typical uses, relative costs, benefits, and other considerations.

4.0 Typical Work Zone Durations

Typical work zones expose personnel to live traffic for varying durations while performing maintenance or construction activities. PWP devices or alternative mitigation measures should be considered for the following work zone durations:

- Long-term stationary work duration greater than six months.
- Long-term stationary work duration of three to six months.
- Long-term stationary work duration more than three days and less than three months.
- Intermediate-term stationary work at a location more than one daylight period up to three days, or night-time (hours of darkness per California Vehicle Code (CVC) Section 280 definition) work lasting more than one hour.
- Short-term:
    - Stationary daytime work that occupies a location for more than one hour within a single daylight period.
    - Short duration work that occupies a location up to one hour.
    - Mobile work that moves intermittently or continuously.

Depending upon the type of work activity, long-term stationary work zones may be considered to have increased exposure and therefore justify use of a PWP device. Conversely, short duration and mobile work zones may be considered low risk in need of an alternative mitigation measure. Project development and construction considerations and strategies used in selection of the PWP device or alternative mitigation measure are addressed later in this guidance. Considerations and strategies used for maintenance work, encroachment permit work, and local agency work can be found in the Maintenance Manual, Chapter 8, Encroachment Permits Manual, and the Local Assistance Procedures Manual, respectively.

5.0 PWP Devices

This section describes typical uses, examples, relative costs, benefits, and other considerations of the PWP devices covered in this guidance.

For the latest Caltrans Policy Documents on the Manual for Assessing Safety Hardware (MASH) Implementation and MASH rated safety devices available for use on the State Highway System, see: https://dot.ca.gov/programs/safety-programs/mash as well as the Work Zone Traffic Control Resources website for further information on PWP devices: https://dot.ca.gov/programs/safety-programs/workzones.

5.1 Temporary Barriers

5.1.1 Concrete Barrier

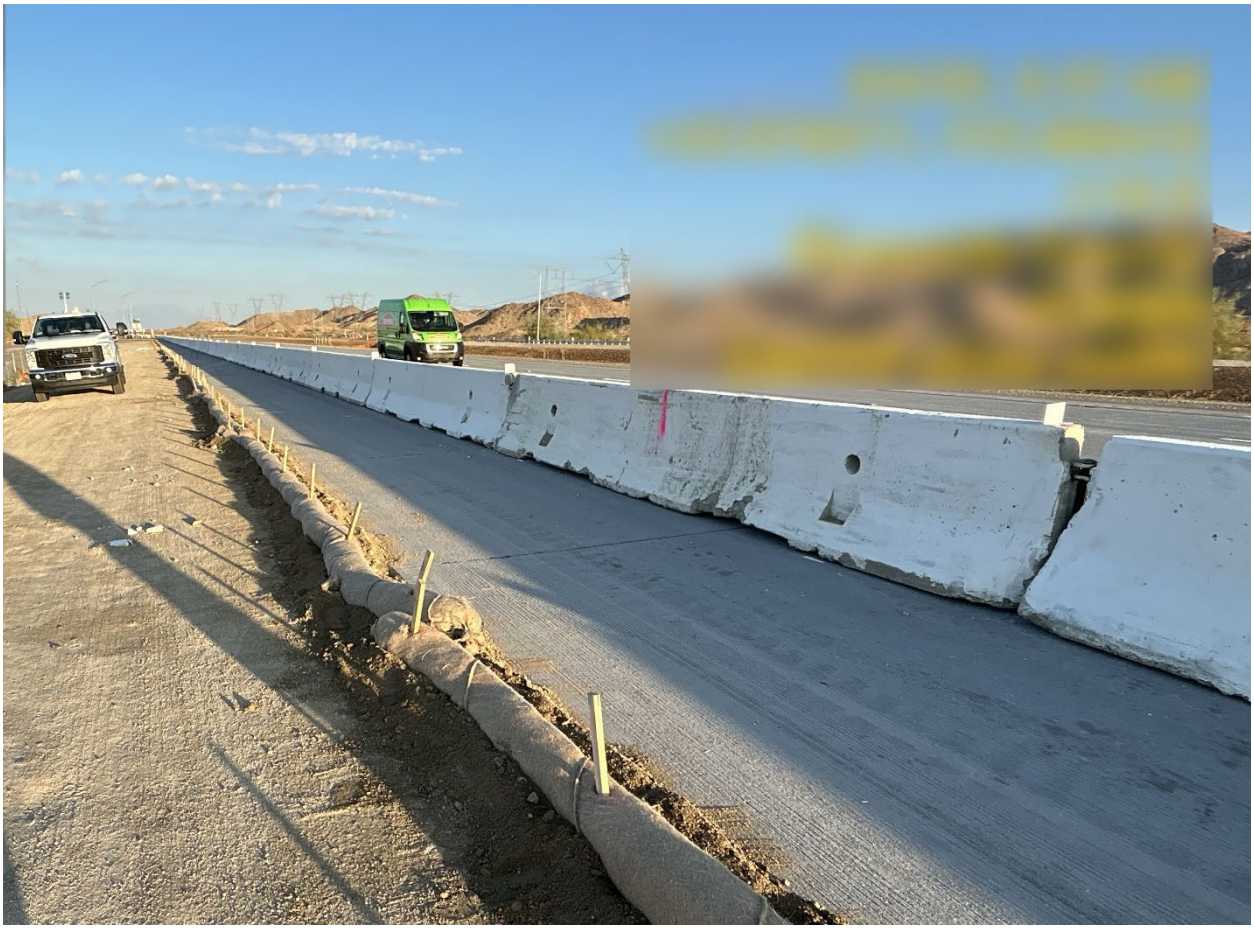


Photo Source: Caltrans, District 8 Construction

Typical Uses

- Long term duration (more than three days) work zones with various posted speed limits and limited width where workers are exposed to nearby live traffic lanes or where traffic is exposed to nearby drop offs, falsework, temporary supports, fixed objects or construction equipment.

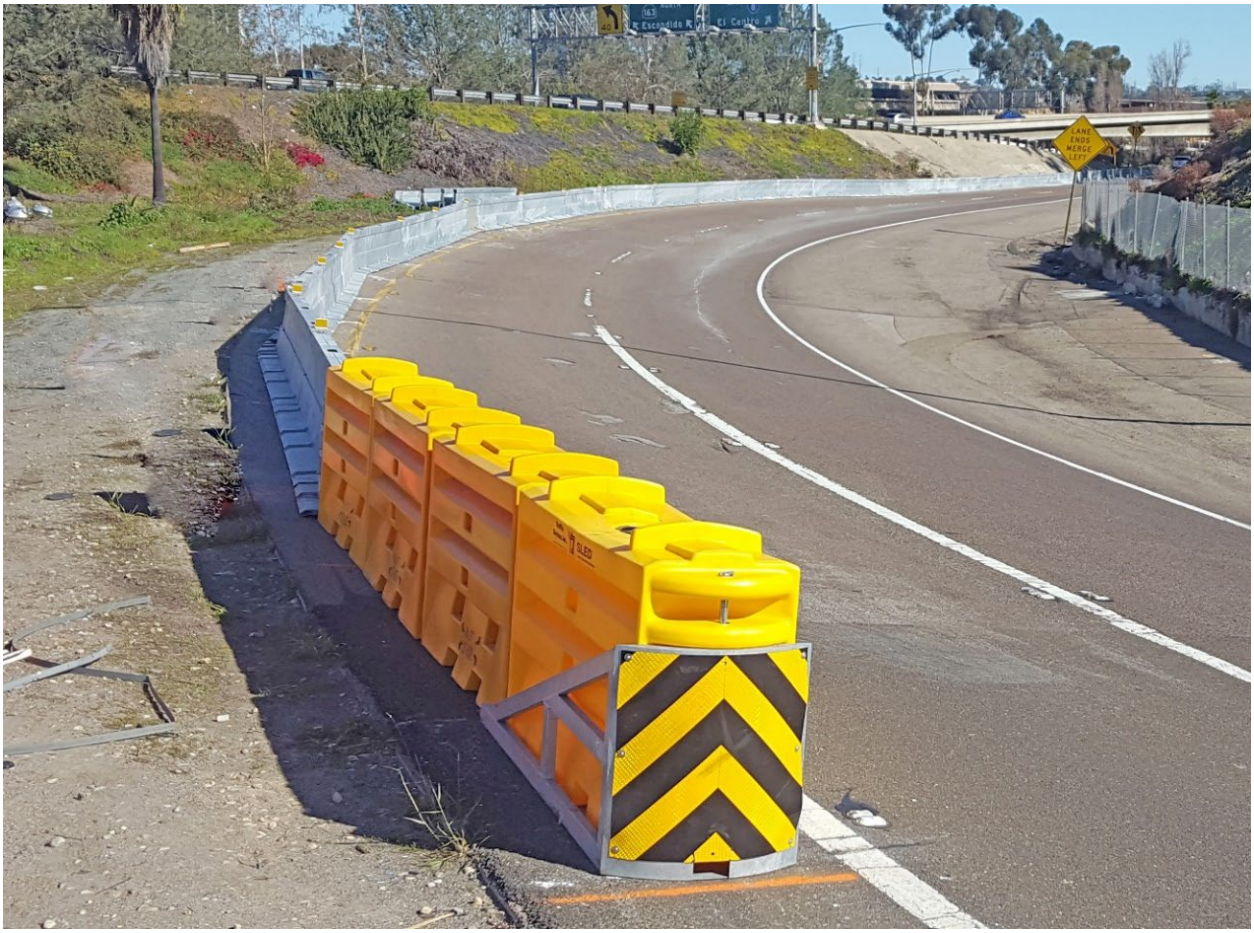
Relative Costs and Benefits

- May be less cost-effective when used throughout longer work zones where work activities are present at specific locations for relatively short periods of time, such as pavement repairs or pavement resurfacing projects where activities frequently move.

Other Considerations

- Falsework and temporary supports are not allowed in the clear area. See the PWP device specifications for guidance and requirements regarding clear area.
- Verify space required for equipment to install and remove the barriers and work zone ingress and egress.
- For access points, exposed ends of barrier must be located and used with temporary crash cushion modules in compliance with Standard Specifications Section 7-1.04 Public Safety. Paid for by LF measured along top of temporary barrier. See the Work Zone Traffic Control Resources website for further information.
- See the Caltrans Plans Preparation Manual for examples of how to indicate this PWP device on traffic handling and stage construction plan sheets.

5.1.2 Steel Barrier



Typical Uses

- Long-term duration (more than 3 days) work zones of various posted speed limits and limited width where workers are exposed to nearby live traffic lanes or where

traffic is exposed to nearby drop offs, falsework, temporary supports, fixed objects or construction equipment.

Relative Costs and Benefits

- Temporary steel barriers can be cost effective for larger projects where thousands of feet to miles of barrier is required. Temporary steel barrier is stackable on delivery trucks providing several hundred feet per truckload potentially reducing trucking cost.

Other Considerations

- Falsework and temporary supports are not allowed in the clear area. See the PWP device specifications for guidance and requirements regarding clear area. Paid for by LF measured along top of temporary barrier. See the Work Zone Traffic Control Resources website for further information.
- See the Caltrans Plans Preparation Manual for examples of how to indicate this PWP device on the traffic handling plan and stage construction plan sheets.

5.1.3 Movable Barrier System

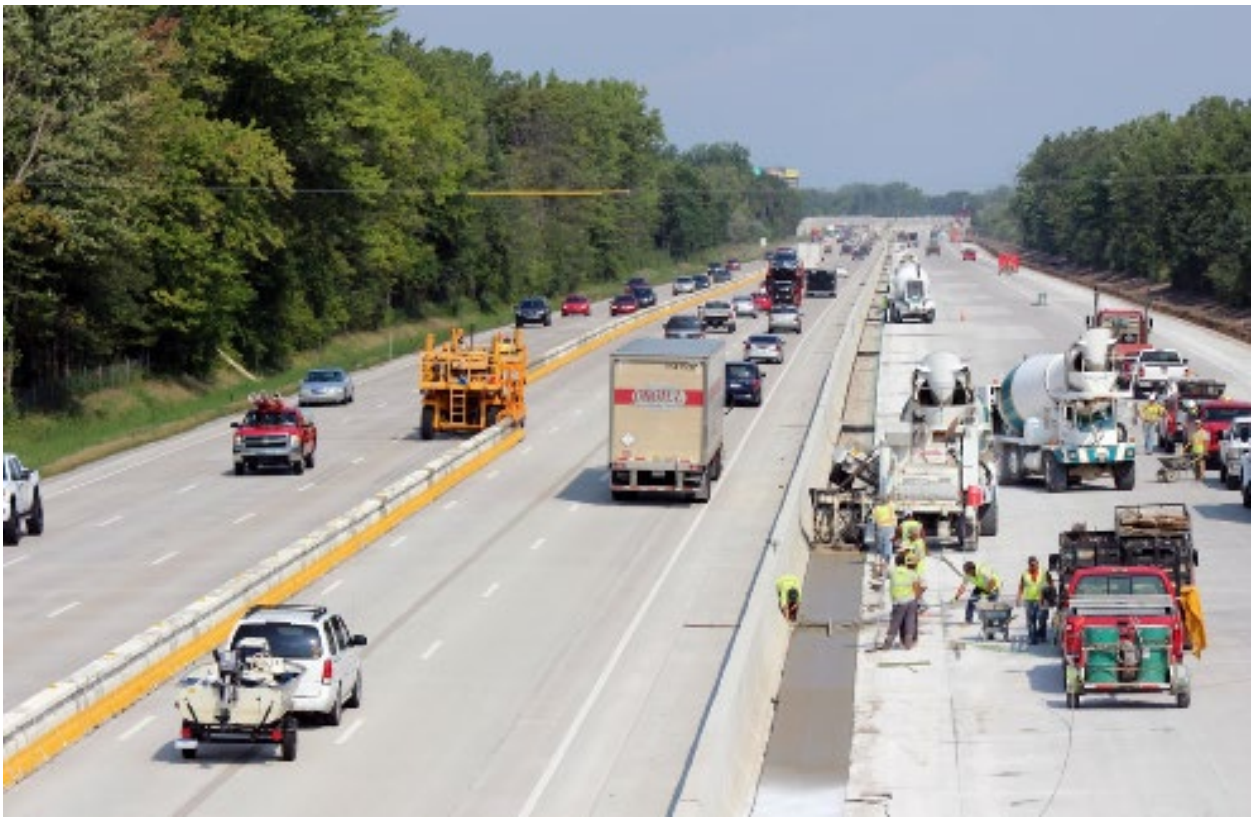


Photo source: Lindsay Corporation

Typical Uses

- Projects where lane shifts are required daily to accommodate directional traffic volume demand or when a lane restriction chart allows a lane to be closed to expand the work area.
- Between opposing lanes of traffic to provide a movable median, change the number of lanes available for traffic use, and accommodate peak traffic flow to mitigate congestion.
- Between motorists and work activities to create additional space.
- On divided highways with an existing median barrier, one side of the highway can be closed to traffic and traffic crossed over to the opposite side.
- Long duration roadway and bridge widening projects that require maintaining high speed multilane traffic.

Relative Costs and Benefits

- More expensive when compared to traditional temporary concrete barrier; however, consider the benefits such as greater throughput in the peak traffic direction, reduced lane closure costs due to fewer personnel required to adjust lane closures to accommodate peak volume periods, movable protected work area and continuous positive protection.

Other Considerations

- Provides a similar level of protection as temporary concrete barrier, but with greater installation flexibility.
- Requires special equipment and specially trained equipment operators to move barrier.
- Depending on length of closure, may take up to 45 minutes to an hour for lane shift of barrier.
- See the PWP device specifications for guidance and requirements regarding clear area.
- Constrained work zones may not accommodate the series of interlocked barrier sections including:
    1) Barrier consisting of reinforced concrete barrier sections with a special steel hinge system,
    2) A transfer and transport machine that moves the barrier sections, with a backup machine available, and
    3) MASH Test Level 3 crash cushions.
- Movable barrier system is a sole source product, therefore a quote for cost of leasing the concrete barrier sections, transfer and transport machine and crash cushion must be included in the project special provisions.

- Due to the cost required to mobilize, assemble, disassemble, and demobilize the movable barrier system, work zones that require only a few days of use should consider other types of PWP.
- The quantity for the bid item includes the number of times the system will be moved or shifted as indicated in a table as shown in the specification.
- See the Caltrans Plans Preparation Manual for examples of how to indicate this PWP device on the traffic handling plan sheets.

5.2 Mobile Barrier System

Photo Source: Caltrans, District 7 Construction

Typical Uses

- Extendable barrier protects the flank of a stationary work zone area of 100 feet or less for short-term work activities.
- Used for work activities that may include but are not limited to pavement and approach slab replacement, guardrail and barrier repair, bridge deck and joint repair, loop detector installation, and full ramp closures preventing vehicles from entering.

Relative Costs and Benefits

- The fact that the barrier can be driven in place and driven off site after work ends lends itself to ease of set up and take down, avoiding restriping, and reducing worker exposure during deployment.
- Lanes that would otherwise have been closed for buffer space can remain open.

- The speed of deployment and removal maximizes working time.

Other Considerations

- Consider use of other PWP devices if there is a need for a mobile barrier system to be stationary for more than a short-term duration. Also, due to the cost to mobilize, assemble, disassemble, and demobilize the mobile barrier system, work zones that require more than a short-term duration should consider other types of PWP.
- The geometry of the work area and surrounding roadway must be compatible with the straight geometry of the 100-foot trailer barrier unit that is driven into place by a semi-trailer truck occupying the lane, shoulder or adjacent lane in which work is to be performed.
- Mobile barrier system must be deployed such that it is in parallel with the movement of traffic and shoulder or lane lines. A mobile barrier system is not to be used as a channelizing device or to direct traffic.
- Use may not be applicable on curves, near ramps and intersections.

5.3 Stationary Impact Attenuator Vehicle

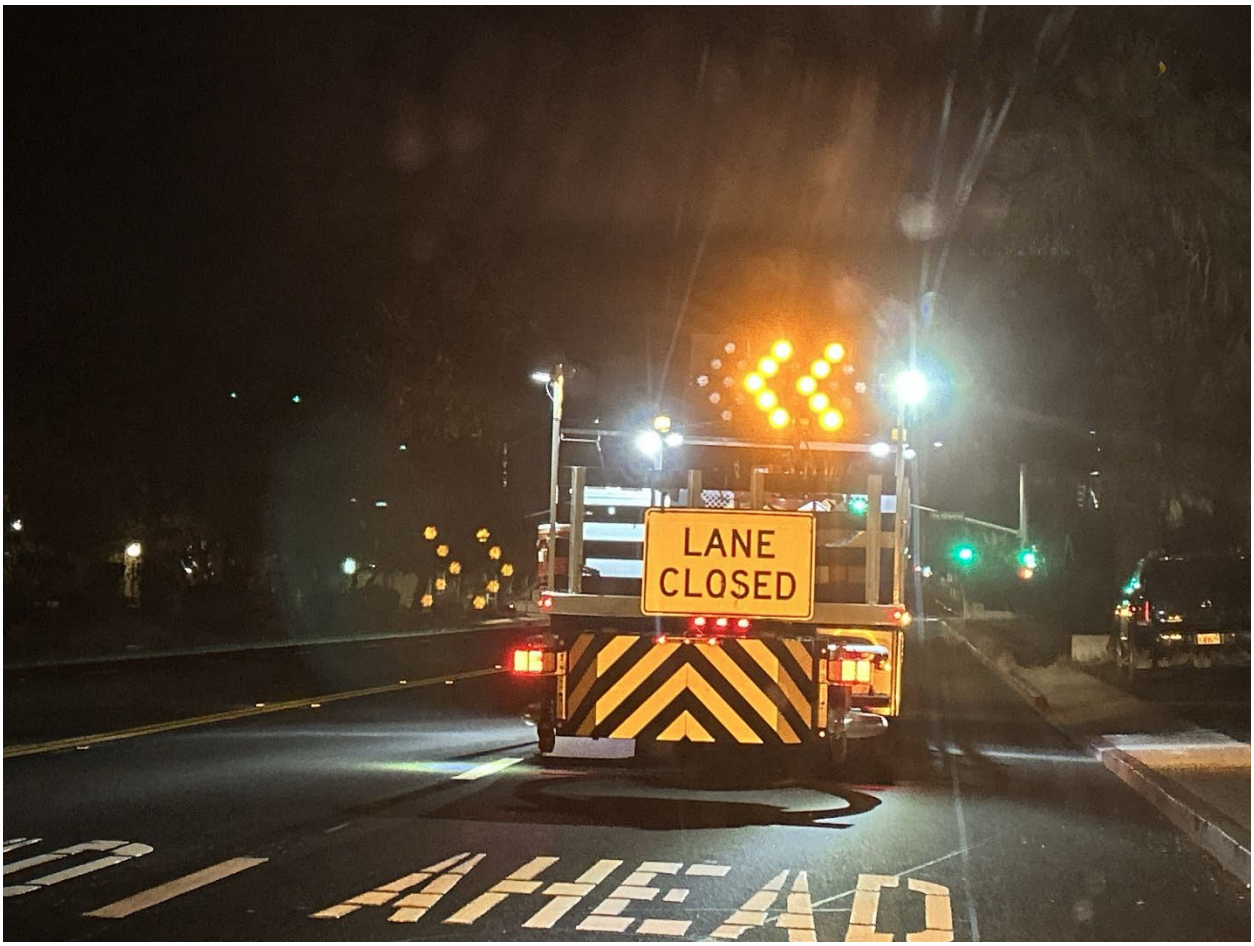


Photo Source: Caltrans, District 8 Construction

Typical Uses

- This device typically follows behind equipment and workers during moving closure operations or is parked in advance of workers during stationary closure operations.
- Used in all work zone duration locations where other PWP devices may not be feasible due to time constraints involved with installation and removal.

Relative Costs and Benefits

- Can be easily and quickly moved as the work zone location and workers change in comparison to other PWP devices.
- Can be used on multiple projects, where costs may be economical when dividing among several projects.
- The cost of a driver may be significant; therefore, consideration should be given to whether a full-time driver is necessary if the stationary impact attenuator vehicle will primarily be stationary.

Other Considerations

- If there is a need for a stationary impact attenuator vehicle to occupy a single location for work more than 3 days, other PWP devices should be considered.
- For further details refer to Standard Specifications 12-4.02C(7), 12-3.23 and SSP 12-4.02C(7)(b).

6.0 Evaluation Steps

Evaluate:

1. Type of work (such as structure, roadway, signal, etc.)

   Consider PWP where workers are exposed close to traffic for long durations. Examples include, bridge approach slab replacement, widening projects and shoulder maintenance. Consideration should be given to use of stationary impact attenuator vehicles during PWP device installation and removal.

2. Exposure to high speed traffic

   Worker exposure is greater in a work zone near high speed traffic. Existing posted speed limits should be considered when anticipating work zone speed. For projects with limited sight distance, PWP should be used to shield the workers from high speed traffic.

3. Traffic volume

   The risk of a crash generally increases with traffic volume, although crash severity may decrease under high volume conditions due to reduced speeds during times of congestion. Traffic that fluctuates between free-flow and stop-and-go conditions can be of greatest concern. Urban freeways are often viable candidates for PWP because of high traffic volumes and a greater likelihood of unstable (stop-and-go) traffic.

4. Vehicle mix

   Projects with a high percentage of trucks and heavy traffic may be good candidates for PWP devices since heavy truck intrusion into the work zone will have greater impact to the work area.

5. Proximity to traffic

   Identify locations where worker exposure is close to traffic lanes, particularly confined areas with limited escape routes. For work at night-time, the escape route should be illuminated. A PWP device is needed when the work zone is adjacent to traffic lanes. This is important since a buffer space is not available to separate workers from motorists, (e.g., confined areas such as bridges or tunnels).

6. Time of day

   Operation during different times of day are important in determining the PWP device for a work zone. Consideration should be given to visibility during day and night-time (hours of darkness per CVC Section 280 definition) operation when evaluating the need for a PWP device.

7. Road user exposure to work zone

   Consider PWP to reduce exposure of road users to drop offs, side slopes that are steeper than 4 to 1, structures, falsework, temporary supports and construction equipment and materials.

8. Exposure of workers and motorists during PWP placement and removal

   Consideration should be given to protect workers and motorists during placement and removal of PWP devices.

9. Roadway geometry

   PWP should be considered at locations with nonstandard curves, shoulders, sight distance or other nonstandard features near the work zone activity area.

10. Ingress and egress from work zone

    Ingress and egress from the work zone should be considered when determining the appropriate PWP device and appropriate mitigation measures or both.

11. Options to reduce, then mitigate temporary exposure conditions for workers.

12. If the project work zone is long-term stationary, intermediate-term stationary, short-term stationary, short duration, or mobile work as defined in Section 4.0 of this DIB.

13. If the work zone is low or high exposure, based on using the Engineering Analysis Form/Exception document Forms CEM-1302 and CEM-1303 as described in Section 10.0.

14. Mitigation measures in lieu of PWP.

15. The use of a PWP device to shield temporary fixed objects should be employed if it is not economically feasible to provide an alternate protection measure nor feasible to place the fixed object outside of the clear recovery zone.

7.0 PWP on Projects

7.1 Required PWP Uses

PWP is required on projects based on Caltrans policy and Standard Specifications for the following conditions:

- In high speed traffic and no escape routes
- Falsework and temporary support protection
- Bridge widening
- Bridge rail replacement, (may include approach railing repair)
- Locations where existing highway safety features must be removed to perform the work (e.g., upgrading existing barrier)
- Protection of temporarily unprotected permanent obstacles (Section 7-1.04 Public Safety of the *Standard Specifications*)
- Where material or equipment is stored within 15 feet of the edge of an open traffic lane (Section 7-1.04 Public Safety of the *Standard Specifications*)
- Excavations where the near edge of the excavation is within 15 feet from the edge of an open traffic lane (Section 7-1.04 Public Safety of the *Standard Specifications*)
    - Exception for steel plate covers required
    - Exception for roadway widening slope of 4:1 (horizontal to vertical) or flatter is specified (*Standard Special Provision* 10-1.02)
- When work operations create a height differential greater than 0.15 feet within 15 feet of the edge of a traffic lane (Section 7-1.04 Public Safety of the *Standard Specifications*)
    - Exception for divided multilane highways height differential less than 0.35 feet allowed when tapered notch wedge is used (Section 39-2.01C(4)(b) Tapered Notch Edge of the *Standard Specifications*)

7.2 Typical PWP Uses

PWP is typically used for the following work zone areas based on engineering assessment:

- Bridge column work
- Approach slab work and other bridge deck repair
- Channelization for cross-over detours
- Slab replacement and pavement dig outs/repair
- Roadway widening or median work
- Excavations adjacent to the traveled way
- Work performed on steep side slopes adjacent to the roadway
- Installation of overhead sign supports and foundations
- Staged pipe or culvert work

- Stored construction material or equipment
- Temporary shoring locations
- Worker safety due to proximity of work next to live traffic lanes

7.3 Consideration of Other Road Users

It is not uncommon, particularly in urban areas, that road work and the associated use of PWP may affect existing pedestrian or bicyclist facilities. It is essential that the mobility needs of all road users, including bicyclists and pedestrians be considered. All considerations should be compliant with Americans with Disabilities Act (ADA) requirements. PWP should be used in such a way to accommodate pedestrians and bicyclists per DIB 82 as well as the CA MUTCD chapters 6D.01 and 6D.101.

When work activities require the closure of an existing pedestrian route, a temporary pedestrian access route (TPAR) should be provided. It should be noted that in some cases it is not possible or feasible to provide a TPAR when an existing pedestrian route is closed, e.g., an overcrossing structure with sidewalks over a freeway that is being demolished and reconstructed. When the TPAR is provided in proximity to work activity, high volume or high speed traffic, such as using a shoulder as the pedestrian route, positive protection for the pedestrians should be provided. See Standard Specification 12-4.04 and Standard Plans T30 - T34 for further information.

If establishing or maintaining an alternate pedestrian route is not feasible during the project, an alternate means of providing for pedestrians may be used, such as adding free bus service around the project or assigning a person the responsibility to assist pedestrians with disabilities through the project limits.

When work activities require the closure of an existing bicycle route, an alternative bicycle route should be provided. When the temporary bicycle route is provided in proximity to heavy or fast-moving traffic, positive protection for the bicycle route may be provided.

8.0 Mitigation Measures In Lieu of PWP

Prior to specifying the use of a PWP device, consideration should be given to alternatives which would avoid or minimize exposure for both workers and road users in work zones. Mitigation measures are to be used in lieu of a PWP device when it is determined that placing a PWP device may cause more exposure than not placing a PWP device.

Below are mitigation measures that may be considered in various work zone environments, see the Work Zone Traffic Control Resources website for further information on the PWP devices and most of these mitigation measures: https://dot.ca.gov/programs/safety-programs/workzones:

1. Work zone speed limit reduction.
2. Expanded work windows such as:
    a. Longer length of closure to enhance work productivity.
    b. Longer lane closure durations that allow work to be completed in fewer working days.

3. Full road closure with traffic detoured offsite or connector/ramp closure. See the Traffic Management Plan Guidelines, Appendix B for additional information: https://dot.ca.gov/programs/traffic-operations/tmp. Full road closure benefits may include, but are not limited to:
    a. Improved public sentiment when public outreach is utilized.
    b. Potential increased worker productivity due to reduced exposure to motorized traffic.
    c. Potential cost savings due to shorter project durations, less materials needed and reduced staging complexity.
4. Close additional travel lanes, use of buffer lanes to increase separation between workers and live traffic.
5. Construction Zone Enhanced Enforcement Program (COZEEP) used to deter speeding and control traffic flow, (For Maintenance work, use Maintenance Zone Enhanced Enforcement Program (MAZEEP)).
6. Use of traffic handling and traffic management plan techniques such as:
    a. Scheduling or sequencing phases of work (performing work during off-peak periods or when traffic volumes are lower).
    b. Onsite diversion (e.g., median crossover, alternate routes, temporary pavement, use of full depth shoulders for traffic; use of ramps as a diversion around a work zone at an interchange).
    c. Use of 4:1 (horizontal to vertical) or flatter slope in lieu of vertical drop off in an excavation to protect road users.
7. Automated flagger assistance devices or use of automated work zone information systems, see Standard Specification 12-3.35 for automated work zone information system details (applies to reversible traffic control on two-lane conventional highways) and Standard Specification 12-3.38 for automated flagger assistance devices details.
8. Portable changeable message sign can be used instead of placement of advance flagger.
9. Traffic breaks.
10. Accelerated construction techniques.
11. Portable transverse rumble strips.
12. Intrusion alarms.

9.0 PWP Engineering Analysis

It is the responsibility of the project engineer to coordinate with the Project Development Team (PDT) to verify that the final decision on use of PWP devices is made collectively. This should include circulation and feedback from the PDT and the District Safety Review Committee including Minor A projects where the project engineer determines the need of the review and final decision for any specific project that is based on exercising engineering judgment. It is the responsibility of the project engineer to include the completed Form CEM-1302 (see Appendix A for forms) in the project development

records for each applicable work zone location within the project limits either on a separate form per location or summarized on one form where multiple work zones of similar work and conditions are proposed. Any modification to the completed and approved Form CEM-1302 must be justified and approved on supplemental Form CEM-1303 by the resident engineer (see Appendix A for form) and filed in the project development records.

Documentation of the selected PWP device or mitigation measure during the design phase is the responsibility of the project engineer. The type of PWP or mitigation measure used must be included in the project plans and/or specifications as appropriate. See the Caltrans Plans Preparation Manual for further information.

The determination of the PWP that is included in project plans is based on the following:

- Required use by policy and specifications
- Pedestrian and bicyclist protection
- Work zone activities engineering risk analysis
- Engineering judgment

Form CEM-1302 “Positive Work Zone Protection Determination” provides a standard format for providing the necessary documentation for PWP. Form CEM-1302 allows the user to perform the engineering risk analysis in determining the need for PWP or mitigation measures for work zone activities by answering questions based on assessment of five risk factors and totaling the risk assessment points for each factor. The project engineer then selects the appropriate PWP or mitigation measures based on Section 6.0 Evaluation Steps or Section 8.0 Mitigation Measures. The selected PWP and mitigation measures are documented on Form CEM-1302.

When the total point score for the work zone activity does not substantiate the use of PWP the project engineer may determine that PWP is necessary based on engineering judgment which must be documented on Form CEM-1302.

Concurrence by the Area Construction Senior is required for the selected PWP measures, engineering risk analysis, and mitigation measures on Form CEM-1302.

If the project engineer has determined that an exception to the requirement for providing PWP is necessary, then the reason for the exception must be provided on Form CEM-1302 and approval of the exception by the Deputy District Directors of Traffic Operations and Construction is required on the form.

For projects managed through the Encroachment Permit Office Process (EPOP), the project sponsor is responsible for documenting the selection of PWP or mitigation measures including completion of form CEM-1302. Exceptions do not require the approval of the Deputy District Director of Construction. Only approval from the Deputy District Director of Traffic Operations is required. Encroachment projects managed through the Quality Management Assessment Process (QMAP) follow the same process as the Caltrans administered process.

Step 1: Required PWP

Refer to Section 7.1 and fill in the check boxes on Form CEM-1302 for any PWP provided in the project plans based on Caltrans policies and specifications for required PWP.

Step 2: Pedestrian and Bicycle Protection

Consider pedestrian and bicycle traffic access through the work zone. Provide an alternate route when existing facilities must be temporarily interrupted due to work operations. Alternative routes need to be clearly delineated and separated from the work zone activities. Refer to Section 7.3 Considerations for Other Road Users for further information.

Pedestrians

Fill in the appropriate check box on Form CEM-1302 based on whether there is no pedestrian access on the project, pedestrian access is not affected, temporary pedestrian access is provided in the project plans or protected pedestrian access has been provided in the project plans.

Bicycles

Fill in the appropriate check box on Form CEM-1302 based on whether there is no bicycle access on the project, bicycle access is not affected, temporary bicycle access is provided in the project plans or protected bicycle access has been provided in the project plans.

Step 3: Work Zone Activities Engineering Risk Analysis

Perform an engineering risk analysis for all work zone activities to determine the level of PWP needed.

Step 3.1: List Work Activities by Work Zone Location for Engineering Risk Analysis

List by work zone number on Form CEM-1302 the various major work activities by work zone location that will occur on the project, such as but not limited to, structure construction, bridge widening, sound wall construction, pavement widening, hot mix asphalt overlay, concrete slab replacement, pavement preservation treatment, landscaping or pavement delineation, etc.

For each work zone activity listed by location an engineering risk analysis must be performed to determine the required level of PWP.

The following factors and risk ratings are considered in the engineering risk analysis for determining the required level of PWP. For each of the five factors perform an assessment to determine the appropriate level of risk and record the information on Form CEM-1302.

Step 3.2: Duration of Work Zone Activity

The exposure of a worker being struck by an errant vehicle is roughly proportional to the amount of time unprotected workers are present at the site. Short duration work activity at a location such as joint repair, pavement resurfacing, or traffic control installation/removal, are lower risk and are less likely to justify the use of PWP barrier

systems, particularly if mitigation control measures are used. Stationary impact attenuator vehicles and mobile barrier systems used as PWP should be considered for short duration work.

The duration of work activity risk assessment rating is based on the work durations shown:

Work Duration Factor	
Work Activity (duration)	Risk (rating)
LONG-TERM STATIONARY WORK GREATER THAN SIX MONTHS	Extremely High
LONG-TERM STATIONARY WORK THREE TO SIX MONTHS	High
LONG-TERM STATIONARY WORK MORE THAN THREE DAYS AND LESS THAN THREE MONTHS	Moderate
INTERMEDIATE[1] STATIONARY WORK	Low
SHORT-TERM[2] STATIONARY, SHORT DURATION[3] AND MOVING CLOSURES	Extremely Low

Notes:

1. Work at a location more than one daylight period up to three days, or night-time (hours of darkness per CVC Section 280 definition) work lasting more than one hour.
2. Daytime work that occupies a location for more than one hour within a single daylight period.
3. Work that occupies a location up to one hour.

Step 3.3: Worker Exposure

Work zone activities that place workers close to live high speed traffic lanes for extended periods are candidates for PWP. As the lateral buffer space between an adjacent open traffic lane and workers decreases, the justification for using PWP becomes stronger.

Worker exposure risk rating is based on the following:

Worker Exposure Factor	
Lateral buffer space between workers and adjacent open traffic lane (feet)	Risk (rating)
LESS THAN 6	High
>6-15	Moderate
>15-30	Low
>30	Extremely Low

Step 3.4: Posted Speed Limits (Before Work Activity Begins)

Evaluation of work zone speed risk rating based on the existing posted speed limits is shown in the following table.

Posted Speed Limit Factor	
Existing Posted Speed Limit (mph)	Risk (rating)
55 OR GREATER	Extremely High
40-50	High
30-35	Moderate
25 OR LESS	Low

Step 3.5: Traffic Volume

Although the risk of a crash generally increases with traffic volume, crash severity may decrease under high volume conditions because of reduced speeds during times of congestion. Traffic that fluctuates between free-flow and stop-and-go conditions can be of greatest concern. As the volume of commercial trucks increases, so does the risk of heavy vehicle intrusion into the work zone. Urban freeways are often viable candidates for PWP because of high traffic volumes and a greater likelihood of unstable (stop-and-go) traffic.

Speed, volume, and worker risk relationships are complicated. On a lightly traveled roadway, the risk of an errant vehicle striking a worker can be expected to rise as the traffic volume rises. In moderately heavy traffic on a roadway with two or more lanes, vehicle-to-vehicle interactions begin to occur, a worker might be at least partially shielded from an errant vehicle by another vehicle in an adjacent lane. Traffic speed tends to decrease as traffic volumes increase close to roadway capacity.

Using vehicle volumes to determine risk factors is extremely complex. Level of Service (LOS) is a term used to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. Refer to the Highway Capacity Manual for a description of the six LOS categories A through F, where LOS A represents free-flow traffic conditions, and LOS F represents high-density stop-and-go traffic flow conditions.

The work zone volume assessment risk rating is based on the LOS shown:

Traffic Volume Factor	
Level of Service (LOS)	Risk (rating)
E	High
D or F	Moderate
C	Low
A-B	Extremely Low

The LOS determination must consider the percentage of trucks especially for high speed traffic roadways with exceptionally high truck volumes, for example, roads serving seaports or intermodal rail terminals.

Step 3.6: Location of Work

PWP shall be considered at sites where workers cannot easily escape the path of errant drivers.

The work location assessment risk rating is based on the location types shown:

Location of Work Factor	
Location (type)	Risk (rating)
BRIDGE OR TUNNEL STRUCTURE, DROP-OFFS 2 FEET OR GREATER, FILLS OR CUTS GREATER THAN 2:1, OR CONFINED AREAS WITH NO ESCAPE ROUTE FOR WORKERS	High
AREAS WITH BARRIERS OR OTHER IMPEDIMENTS THAT HAVE A REASONABLE ESCAPE ROUTE FOR WORKERS	Moderate
AREAS THAT HAVE A VIABLE ESCAPE ROUTE	Low
OPEN AREA WITH MULTIPLE ESCAPE ROUTES FOR WORKERS	Extremely Low

Step 3.7: Risk Assessment Score

Total the points recorded for each factor to determine the risk assessment score for each work zone location.

Score	Action to be Taken
36 or more	PWP devices required
20-35	PWP devices must be used where possible, or mitigation is required to reduce worker exposure
Less than 20	Use standard temporary traffic control

Fill in the appropriate box for the level of PWP required for the work zone activity on Form CEM-1302.

Step 3.8: Determine the PWP Device for Each Work Zone

Refer to Section 5.0 PWP Devices for information regarding the various PWP devices. For work zone activities with scores that require PWP devices, determine the appropriate PWP device to be used based on Section 6.0 Evaluation Steps. If PWP is not provided for a work zone activity with a total rating score of 20-35, provide the reason why PWP is not feasible on Form CEM-1302.

Step 3.9: Determine Mitigation Measures for Work Zones

For work zone activities with scores that require mitigation measures, determine the appropriate mitigation measure(s) to be used based on Section 6.0 Evaluation Steps. Selection of mitigation measures should be based on the mitigation measure information provided in Section 8.0 Mitigation Measures.

Mitigation measures may also be applied in conjunction with PWP devices within work zones. Fill in the appropriate check box for the mitigation measures provided in the project on Form CEM-1302.

Step 4: Exception to Required Use of PWP

If the required PWP is not feasible for a work zone activity the project engineer must provide the reason for an exception not to use the required PWP. Provide the required documentation of the reason for not providing PWP on Form CEM-1302.

For Caltrans administered and QMAP projects, the Deputy District Directors of Traffic Operations and Construction must approve exceptions. For EPOP projects, the Deputy District Director of Traffic Operations must approve exceptions.

Step 5: PWP Based on Engineering Judgment

There may be other considerations justifying the use of PWP based on engineering judgment. It is possible that a site could include a situation that does not meet the criteria for PWP based on the risk analysis procedure described above; however, PWP is justified

based on sound engineering judgment. Although it is not possible to create a comprehensive list of all higher-risk situations, some examples include:

- Roadways with nonstandard curves, shoulders, sight distance or other nonstandard features near the work zone activity area.
- Locations where ramps or lane closure merges could adversely affect traffic flow. See Standard Plans T2, and T3A – T3F2 for further information.
- When operating two-way traffic on one side of a divided highway in median crossover lane closure conditions, consider further temporary speed reduction and use of PWP separating opposing directions of traffic.

Step 6: Project Engineer or Project Sponsor Seal and Signature

Form CEM-1302 documents the engineering analysis completed by an appropriate licensed engineer. Therefore, the project engineer must provide a seal and signature on the document.

For encroachment permit projects, the project sponsor is responsible for documenting the selection of PWP or mitigation measures including completion of Form CEM-1302.

Step 7: Construction Senior Concurrence

The Area Construction Senior must concur with the proposed PWP plan on Form CEM-1302. This is to document that the District Construction staff who are most knowledgeable about the project area have reviewed and agree with the proposed PWP plan.

This requirement applies to Caltrans projects and all projects that require an encroachment permit from Caltrans.

Step 8: Exception Approval

If the project engineer has determined that an exception to the requirement for providing PWP is necessary, then concurrence from the Deputy District Director of Design is required prior to seeking approval by the Deputy District Directors of Traffic Operations and Construction on Form CEM-1302.

For encroachment permits projects managed through the EPOP, if an exception to the requirement for providing PWP is justified, exception approval by the Deputy District Director of Traffic Operations is required. The exception for these projects does not require the approval of the Deputy District Director of Construction. Encroachment projects managed through the QMAP follow the same process as the Caltrans administered projects.

Step 9: Document Retention

Include the completed and signed Form CEM-1302, including any approved exception in the project development records and resident engineer's pending file.

10.0 Documenting Revisions, Additions or Exceptions to PWP During Construction and Other Work Activities

During construction and other work activities, changes to PWP may occur due to ordered changes or differing–site conditions. During construction the resident engineer is responsible for documenting revisions, additions, or exceptions for PWP or mitigation measures. Collaboration with district design and district traffic operations is encouraged.

Form CEM-1303 “Positive Work Zone Protection Supplement” in Appendix A provides a standard format for providing the necessary documentation for changes to PWP during construction. Form CEM-1303 allows the resident engineer to modify PWP based on:

1. Required use by policy and specifications
2. Pedestrian and bicyclist protection
3. Work zone activity engineering risk analysis
4. Engineering judgment

An engineering risk analysis must be performed on Form CEM-1303, like the analysis performed during the design of the project on Form CEM 1302, to determine changes in the need for PWP or mitigation measures during construction and other work activities.

If the resident engineer has determined that an exception to providing PWP included in the contract bid documents is necessary, then the reason for the exception must be provided on Form CEM-1303 and approval of the exception by the Deputy District Directors of Traffic Operations and Construction are required.

When a PWP supplement is necessary the resident engineer should work with the project engineer to determine who is best suited to complete the documentation. Changes to work zones and work activities that are requested by design should include the completed Form CEM-1303.

For guidance on completing Form CEM-1303, refer to Section 10.0 Engineering Analysis and Positive Protection Exception Documentation.

The completed and signed Form CEM-1303, including any approved exception, is to be filed in the project file Category 13 Signs and Striping. Provide a copy of completed Form CEM-1303 to the project engineer and ensure a copy is placed in the project development records.

For encroachment permit projects managed through the EPOP, the project sponsor is responsible for documenting revisions, additions, or exceptions for PWP or mitigation measures. A copy of the documentation must be provided to the Caltrans representative overseeing the project. Any changes or exceptions to approved PWP implementation or exceptions must be submitted to Caltrans for review and approval. Exceptions require documentation using Form CEM-1303 and approval by the Deputy District Director of Traffic Operations.

Exceptions on these projects do not require the approval by the Deputy District Director of Construction. Encroachment projects managed through the QMAP follow the same process as the Caltrans administered projects.

Appendix A: Positive Work Zone Protection
Forms CEM-1302 and CEM-1303

Form CEM-1302 POSITIVE WORK ZONE PROTECTION DETERMINATION

Form CEM-1303 POSITIVE WORK ZONE PROTECTION SUPPLEMENT

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION DETERMINATION

CEM-1302 (02/20/2026)

Date	

To Project File and Resident Engineer Pending File	DISTRICT		EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT
	COUNTY	ROUTE	PROJECT IDENTIFIER NUMBER
FROM Project Engineer or Project Sponsor	BEGIN POST MILE		END POST MILE

REQUIRED POSITIVE WORK ZONE PROTECTION

Project requires positive work zone protection for the following: (Check all that apply.)

- ☐ In high speed traffic (posted speed greater than 45 mph) and no escape routes
- ☐ Falsework protection
- ☐ Bridge widening
- ☐ Bridge rail replacement
- ☐ Locations where existing positive protection devices must be removed to perform the work.
- ☐ Protection of temporarily unprotected permanent obstacles (Section 7-1.04 Public Safety of the *Standard Specifications*)
- ☐ Where material or equipment is stored within 15 feet of the edge of an open traffic lane (Section 7-1.04 Public Safety of the *Standard Specifications*)
- ☐ Excavations where the near edge of the excavation is within 15 feet from the edge of an open traffic lane (Section 7-1.04 Public Safety of the *Standard Specifications*)
  - ☐ Exception steel plate covers required on conventional highways only.
  - ☐ Exception for roadway widening slope of 4:1 (horizontal : vertical) or less is specified (*Standard Special Provision* 10-1.02 Excavation.
- ☐ When work operations create a height differential greater than 0.15 feet within 15 feet of the edge of a traffic lane (Section 7-1.04 Public Safety of the *Standard Specifications*)
  - ☐ Exception for divided multilane highways height differential less than 0.35 feet allowed when tapered notch wedge is used (Section 39-2.01C(4)(b) Tapered Notch Edge of the *Standard Specifications*.
- ☐ None

PEDESTRIAN AND BICYCLE POSITIVE WORK ZONE PROTECTION

Pedestrian Access (Check one)

- ☐ No pedestrian access.
- ☐ Pedestrian proximity to heavy or fast-moving traffic has not been changed by project.
- ☐ Temporary pedestrian access route provided.
- ☐ Pedestrian positive work zone protection provided due to proximity to work activity, heavy or fast-moving traffic.

Bicycle Access (Check one)

- ☐ No bicycle access.
- ☐ Bicycle proximity to heavy or fast-moving traffic has not been changed by project.
- ☐ Temporary bicycle route provided.
- ☐ Bicycle positive work zone protection provided due to proximity to heavy or fast-moving traffic.

WORK ACTIVITIES REQUIRING WORK ZONE ENGINEERING RISK ASSESSMENT

WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER
WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER
WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION DETERMINATION

CEM-1302 (02/20/2026)

DISTRICT	EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT	COUNTY	ROUTE	BEGIN POST MILE	END POST MILE

WORK ZONE ENGINEERING RISK ANALYSIS RATING

WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ZONE ACTIVITY		STAGE/PHASE NUMBER

For each factor based on your assessment choose which condition best describes the work area.

	FACTOR 1– DURATION OF SPECIFIC WORK ZONE ACTIVITY	POINTS	RATING
CHOOSE ONE CONDITION	LONG-TERM STATIONARY WORK DURATION GREATER THAN SIX MONTHS	10	
	LONG-TERM STATIONARY WORK DURATION OF THREE MONTHS TO SIX MONTHS	8	
	LONG-TERM STATIONARY WORK DURATION MORE THAN THREE DAYS AND LESS THAN THREE MONTHS	6	
	INTERMEDIATE STATIONARY WORK	3	
	SHORT-TERM STATIONARY, SHORT DURATION AND MOVING CLOSURES	0	

	FACTOR 2 – WORKER EXPOSURE	POINTS	RATING
CHOOSE ONE CONDITION	WORKERS ARE EXPECTED TO BE WITHIN THE WORK CLEAR ZONE (0-6 feet)	10	
	WORKERS ARE EXPECTED TO BE OUTSIDE THE WORK CLEAR ZONE, BUT WITHIN THE CONSTRUCTION CLEAR ZONE (>6-15 feet)	6	
	WORKERS ARE EXPECTED TO BE OUTSIDE OF THE CONSTRUCTION CLEAR ZONE (>15 feet), BUT WITHIN THE AASHTO CLEAR ZONE (30 feet)	3	
	WORKERS ARE EXPECTED TO BE OUTSIDE OF THE AASHTO CLEAR ZONE (>30 feet)	0	

	FACTOR 3 – EXISTING POSTED SPEED LIMIT (Prior to Construction or Work Activity)	POINTS	RATING
CHOOSE ONE CONDITION	POSTED SPEED LIMIT IS 55 MPH OR GREATER	10	
	POSTED SPEED LIMIT IS 40 MPH – 50 MPH, OR PILOT CAR OPERATION REGARDLESS OF POSTED SPEED LIMIT	6	
	POSTED SPEED LIMIT IS 30 MPH OR 35 MPH	3	
	POSTED SPEED LIMIT IS 25 MPH OR LESS	0	

	FACTOR 4 – TRAFFIC VOLUME	POINTS	RATING
CHOOSE ONE LOS	LEVEL OF SERVICE E	10	
	LEVEL OF SERVICE D or F	6	
	LEVEL OF SERVICE C	3	
	LEVEL OF SERVICE A or B	0	

	FACTOR 5 – LOCATION OF WORK	POINTS	RATING
CHOOSE ONE CONDITION	BRIDGE OR TUNNEL STRUCTURE, DROP-OFFS 2 FEET OR GREATER, FILLS OR CUTS GREATER THAN 2H:1V, OR CONFINED AREAS WITH NO ESCAPE ROUTE FOR WORKERS	10	
	AREAS WITH BARRIERS OR OTHER IMPEDIMENTS THAT HAVE A REASONABLE ESCAPE ROUTE FOR WORKERS	6	
	AREAS THAT HAVE A VIABLE ESCAPE ROUTE	3	
	OPEN AREA WITH MULTIPLE ESCAPE ROUTES FOR WORKERS	0	
		TOTAL SCORE:	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION DETERMINATION

CEM-1302 (02/20/2026)

DISTRICT	EXPENDITURE AUTHORIZATION	COUNTY	ROUTE	BEGIN POST MILE	END POST MILE

Based on total point score for the work activity and location determine the action to be taken.

Score	Action to be Taken
36 or more	Positive work zone protection devices required
20-35	Positive work zone protection devices must be used where possible, or mitigation measures are required to reduce worker exposure
Less than 20	Use standard temporary traffic control

POSITIVE WORK ZONE PROTECTION DETERMINATION

WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER

TOTAL SCORE

- ☐ Positive Work Zone Protection Required
- ☐ Positive Work Zone Protection or Mitigation Measures Required
- ☐ Standard Temporary Traffic Control Required

POSITIVE WORK ZONE PROTECTION

The following positive work zone protection will be used on this contract:

- ☐ Temporary Concrete Barrier
- ☐ Steel Barrier
- ☐ Movable Barrier System
- ☐ Mobile Barrier System
- ☐ Stationary Impact Attenuator Vehicle

MITIGATION MEASURES

The following mitigation measures will be used on this contract:

- ☐ Work Zone Speed Limit Reduction
- ☐ Expanded Work Windows
- ☐ Full Road Closure

MITIGATION MEASURES CONTINUED

- ☐ Buffer Lanes
- ☐ Construction Zone Enhanced Enforcement Program (COZEEP)
- ☐ Traffic Handling/Transportation Management Techniques
- ☐ Automated Flagger Assistance Devices
- ☐ Portable Changeable Message Sign Instead of Advance Flagger
- ☐ Traffic Breaks
- ☐ Accelerated Construction Techniques
- ☐ Portable Transverse Rumble Strips
- ☐ Intrusion Alarms

If positive work zone protection is not provided for rating score of 20-35 provide reason:

Reason:

EXCEPTION* TO USE OF REQUIRED POSITIVE WORK ZONE PROTECTION

Exception to not provide required positive work zone protection when rating score is 36 or more or when a required scenario is checked in the REQUIRED POSITIVE WORK ZONE PROTECTION section on page A-2:

Reason for exception to provide positive work zone protection:

* Exception must be approved by DEPUTY DISTRICT DIRECTORS OF TRAFFIC OPERATIONS and CONSTRUCTION. For encroachment permit projects managed through the EPOP, only approval by DEPUTY DISTRICT DIRECTOR OF TRAFFIC OPERATIONS is required.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION DETERMINATION

CEM-1302 (02/20/2026)

DISTRICT	EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT	COUNTY	ROUTE	BEGIN POST MILE	END POST MILE

POSITIVE WORK ZONE PROTECTION BASED ON ENGINEERING JUDGMENT

ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)

LOCATION	WORK ACTIVITY	STAGE/PHASE NUMBER

Reason for providing positive work zone protection:

Positive Work Zone Protection Provided:

ENGINEER DETERMINATION OF POSITIVE WORK ZONE PROTECTION

_____

Registered Civil Engineer Date

I have evaluated the project positive work zone protection and determined the appropriate requirements to incorporate into the contract as shown on this form.

SIGNATURE	PRINT NAME	DATE

AREA CONSTRUCTION SENIOR CONCURRENCE

SIGNATURE	PRINT NAME	DATE

MUST BE COMPLETED FOR EXCEPTIONS ONLY

DEPUTY DISTRICT DIRECTOR OF DESIGN CONCURRENCE OF EXCEPTION

☐ Exception to providing positive work zone protection is concurred based on the above reasons.

☐ Encroachment permit project managed through the EPOP, approval from Deputy District Director of Design not required.

SIGNATURE	PRINT NAME	DATE

DEPUTY DISTRICT DIRECTOR OF TRAFFIC OPERATIONS APPROVAL OF EXCEPTIONS

☐ Exception to providing positive work zone protection is granted based on the reasons shown above.

SIGNATURE	PRINT NAME	DATE

DEPUTY DISTRICT DIRECTOR OF CONSTRUCTION APPROVAL OF EXCEPTIONS

☐ Encroachment permit project managed through the EPOP, approval from Deputy District Director of Construction not required.

☐ Exception to providing positive work zone protection is granted based on the reasons shown above.

SIGNATURE	PRINT NAME	DATE

GENERAL INFORMATION

- This form is to provide documentation that a project complies with the policy for providing positive work zone protection.
- Positive work zone protection is required based on:
  - Caltrans policies and specifications
  - Protection for pedestrians and bicycles
  - Construction work zone activity engineering risk analysis
  - Engineering judgment
- Refer to Design Information Bulletin 91 “Guidelines on the Positive Work Zone Protection (PWP) & Mitigation Measures.”

FORM (To be completed by the project engineer or project sponsor)

- **DISTRICT:** Enter the district number of the project.
- **EXPENDITURE AUTHORIZATION:** Enter the project expenditure authorization or encroachment permit number for projects managed through the Encroachment Permit Office Process (EPOP).
- **COUNTY:** Enter the abbreviation for the county where the project is located.
- **ROUTE:** Enter the route number for the project.
- **PROJECT IDENTIFIER NUMBER:** Enter the project identifier number.
- **BEGIN POST MILE / END POST MILE:** Enter the begin and end post miles for the project limits.

REQUIRED POSITIVE WORK ZONE PROTECTION

1. Check boxes for positive work zone protection provided for in the project plans based on Caltrans policies and the Standard Specifications for required positive protection.

PEDESTRIAN AND BICYCLE POSITIVE WORK ZONE PROTECTION

1. Check appropriate check box for pedestrian access based on whether there is pedestrian access on the project, pedestrian access is not affected, temporary pedestrian access is provided in the project plans or protected pedestrian access has been provided in the project plans.
2. Check appropriate check box for bicycle access based on whether there is no bicycle access on the project, bicycle access is not affected by the project or temporary bicycle route is provided in the project plans, or protected bicycle access has been provided.

WORK ACTIVITIES REQUIRING WORK ZONE ENGINEERING RISK ASSESSMENT

1. Determine the various major work activities by work zone location that will occur on the project, such as structure construction, bridge widening, sound wall construction, pavement widening, hot mix asphalt overlay, concrete slab replacement or landscaping.

2. List by work zone each work zone activity and provide the following information:

- **ROUTE:** Enter the route number for the project.
- **DIRECTION:** Enter direction of travel.
- **BEGIN POST MILE / END POST MILE:** Enter the begin and end post miles for the project limits.
- **DURATION:** Enter the number of days will work activity affect traffic.
- **WORK ACTIVITY:** Enter the type of work activity for the entire project or phase/stage of the project.
- **LOCATION:** Enter general description of the location of the work.
- **STAGE/PHASE NUMBER:** For multiple work activities at the same location, enter the stage or phase number for the construction activity.

WORK ZONE ENGINEERING RISK ANALYSIS RATING

1. For each work zone activity, perform a work zone engineering risk analysis to determine if positive work zone protection, mitigation measures or standard traffic control is required.

   For the work zone risk analysis, the definitions for work duration are:
   - Long-term stationary is work that occupies a location more than six months.
   - Long-term stationary work duration of three to six months.
   - Long-term stationary work duration more than three days and less than three months.
   - Intermediate-term stationary work at a location more than one daylight period up to three days, or night-time (hours of darkness per CVC Section 280 definition) work lasting more than one hour.
   - Short-term stationary daytime work that occupies a location for more than one hour within a single daylight period, short duration work that occupies a location up to one hour, or mobile is work that moves intermittently or continuously.

   For each factor of a work zone activity risk analysis, choose which condition best describes each work zone based on your risk assessment.
   - FACTOR 1: Check “box” for the estimated duration of the work activity.
   - FACTOR 2: Check “box” based on worker exposure.
   - FACTOR 3: Check “box” based on existing posted speed limit prior to construction or work activity.
   - FACTOR 4: Check “box” based on the traffic volume level of service.
   - FACTOR 5: Check “box” based on location of work.
2. Enter the points for each factor in the factor points column based on the condition box checked for the work zone activity.
3. Total the points from the five factors to determine the risk score for the work zone activity.

POSITIVE WORK ZONE PROTECTION DETERMINATION

1. Based on the risk assessment rating total score, check the “box” for the required action to be taken:
   - 36 or more – Positive work zone protection is required
   - 20 - 35 - Positive work zone protection or mitigation measure is required to reduce worker exposure
   - Less than 20 -Standard temporary traffic control is required.
2. **POSITIVE WORK ZONE PROTECTION:** Check the appropriate “box(s)” for positive work zone protection devices to be included in the contract specifications and bid items.
3. **MITIGATION MEASURES:** Check the appropriate “box(es)” for mitigation measures that will be included in the contract specifications and bid items.
4. If positive protection is not provided for rating of 20-35 provide reason positive protection is not feasible in the box provided.
5. **EXCEPTION NOT TO USE REQUIRED POSITIVE WORK ZONE PROTECTION:** In the box provided, provide reason for exception not to provide positive work zone protection when rating is 36 or more or when required by the policy. Approval of the exception by the deputy district directors of Design, Traffic Operations and Construction is required on the form.
6. For projects managed through the EPOP, the project sponsor is responsible for documenting the selection of PWP or mitigation measures. Exceptions do not require the approval of the deputy district director of Construction. Only approval from the deputy district director of Traffic Operations is required. Encroachment projects managed through the Quality Management Assessment Process follow the same process as the Caltrans administered process.

POSITIVE WORK ZONE PROTECTION BASED ON ENGINEERING JUDGMENT

1. When use of positive work zone protection is based on engineering judgment, document the reason the use of positive protection is necessary and the type of positive protection that will be used. The documentation must include the location information and work activity.
2. List by work zone each work zone activity and provide the following information:
   - **ROUTE:** Enter the route number for the project.
   - **DIRECTION:** Enter direction of travel.
   - **BEGIN POST MILE / END POST MILE:** Enter the begin and end post miles for the project limits.
   - **DURATION:** Enter the number of days will work activity affect traffic.
   - **WORK ACTIVITY:** Enter the type of work activity for the entire project or phase/stage of the project.
   - **LOCATION:** Enter general description of the location of the work.
   - **STAGE/PHASE NUMBER:** For multiple work activities at the same location, enter the stage or phase number for the work activity.

ENGINEER DETERMINATION OF POSITIVE WORK ZONE PROTECTION

Project positive work zone protection determination must be sealed by a registered professional engineer. For encroachment permit projects managed through the EPOP, the project sponsor must sign and seal.

- **REGISTRATION SEAL:** Complete the registration seal by providing the name of the engineer responsible for preparing the project positive work zone protection determination, their registration number and expiration date.
- **PROJECT ENGINEER OR PROJECT SPONSOR:** Signature and printed name of engineer or project sponsor that prepared the positive work zone protection determination.
- **DATE:** Date signed by the engineer or project sponsor.

AREA CONSTRUCTION SENIOR CONCURRENCE

Project positive work zone protection determination must be concurred by the area construction senior. For encroachment permit projects managed through the EPOP, the area construction senior must concur.

DEPUTY DISTRICT DIRECTOR OF DESIGN CONCURRENCE OF EXCEPTION

This section must be completed for exceptions only. For encroachment permit projects managed through the EPOP, concurrence by the deputy district director of Design is not required.

- **CONCURRENCE:** Check the box for exception concurrence.
- **DEPUTY:** Signature and printed name.
- **DATE:** Date signed.

DEPUTY DISTRICT DIRECTOR OF TRAFFIC OPERATIONS AND CONSTRUCTION APPROVAL OF EXCEPTIONS

This section must be completed for exceptions only.

- **APPROVAL:** Check the box for exception approval.
- **DEPUTY:** Signature and printed name.
- **DATE:** Date signed.

Note: For encroachment permit projects managed through the EPOP, only approval by the deputy district director of Traffic Operations is required.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION SUPPLEMENT

CEM-1303 (02/20/2026)

Date		
To Project File	DISTRICT	EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT
FROM	COUNTY / ROUTE	PROJECT IDENTIFIER NUMBER
	BEGIN POST MILE	END POST MILE

WORK ZONE INFORMATION

WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER

SUPPLEMENT TYPE

This positive work zone protection supplement provides for a positive work zone protection: (check one)

- ☐ Addition
- ☐ Revision
- ☐ Exception

SUPPLEMENT JUSTIFICATION

BASIS FOR POSITIVE WORK ZONE PROTECTION

The positive work zone protection supplement is based on: (Check one)

- ☐ Required use by policy and specifications
- ☐ Pedestrian and bicyclist protection
- ☐ Work zone construction activity engineering risk analysis
- ☐ Engineering judgment

Positive work zone protection supplement is required because:

Reason:

Positive work zone protection to be used:

Mitigation measure to be used:

POSITIVE WORK ZONE PROTECTION EXCEPTION (see Note)

☐ Not Required

Deleting positive work zone protection provided for the contract is required because:

Reason:

NOTE: Exception must be approved by DEPUTY DISTRICT DIRECTORS OF TRAFFIC OPERATIONS and CONSTRUCTION. For encroachment permit projects managed through the Encroachment Permit Office Process (EPOP), only approval by the DEPUTY DISTRICT DIRECTOR OF TRAFFIC OPERATIONS is required.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION SUPPLEMENT

CEM-1303 (02/20/2026)

DISTRICT	EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT	COUNTY	ROUTE	BEGIN POST MILE	END POST MILE

WORK ZONE ENGINEERING RISK ANALYSIS RATING

☐ Not Required

Work Zone Information

WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER

For each factor, choose which condition best describes the work area based on your assessment

FACTOR 1–DURATION OF SPECIFIC CONSTRUCTION WORK ACTIVITY		POINTS	RATING
CHOOSE ONE CONDITION	LONG-TERM STATIONARY WORK DURATION GREATER THAN SIX MONTHS	10	
	LONG-TERM STATIONARY WORK DURATION OF 3 TO 6 MONTHS	8	
	LONG-TERM STATIONARY WORK DURATION MORE THAN 3 DAYS AND LESS THAN 3 MONTHS	6	
	INTERMEDIATE STATIONARY WORK	3	
	SHORT-TERM STATIONARY, SHORT DURATION AND MOVING CLOSURES	0	

FACTOR 2–WORKER EXPOSURE		POINTS	RATING
CHOOSE ONE CONDITION	WORKERS ARE EXPECTED TO BE WITHIN THE WORK CLEAR ZONE (0-6 feet)	10	
	WORKERS ARE EXPECTED TO BE OUTSIDE THE WORK CLEAR ZONE (>6 feet), BUT WITHIN THE CONSTRUCTION CLEAR ZONE (>6-15 feet)	6	
	WORKERS ARE EXPECTED TO BE OUTSIDE OF THE CONSTRUCTION CLEAR ZONE (>15 feet), BUT WITHIN THE AASHTO CLEAR ZONE (>15-30 feet) (see Note)	3	
	WORKERS ARE EXPECTED TO BE OUTSIDE OF THE AASHTO CLEAR ZONE (>30 feet)	0	

FACTOR 3–EXISTING POSTED SPEED LIMIT (Before Construction or Work Activity)		POINTS	RATING
CHOOSE ONE CONDITION	POSTED SPEED LIMIT IS 55 MPH OR GREATER	10	
	POSTED SPEED LIMIT IS 40 MPH TO 50 MPH, OR PILOT CAR OPERATION REGARDLESS OF POSTED SPEED LIMIT	6	
	POSTED SPEED LIMIT IS 30 MPH OR 35 MPH	3	
	POSTED SPEED LIMIT IS 25 MPH OR LESS	0	

FACTOR 4–TRAFFIC VOLUME		POINTS	RATING
CHOOSE ONE LOS	LEVEL OF SERVICE E	10	
	LEVEL OF SERVICE D or F	6	
	LEVEL OF SERVICE C	3	
	LEVEL OF SERVICE A or B	0	

FACTOR 5–LOCATION OF WORK		POINTS	RATING
CHOOSE ONE CONDITION	BRIDGE OR TUNNEL STRUCTURE, DROP-OFFS 2 FEET OR GREATER, FILLS OR CUTS GREATER THAN 2H:1V, OR CONFINED AREAS WITH NO ESCAPE ROUTE FOR WORKERS	10	
	AREAS WITH BARRIERS OR OTHER IMPEDIMENTS THAT HAVE A REASONABLE ESCAPE ROUTE FOR WORKERS	6	
	AREAS THAT HAVE A VIABLE ESCAPE ROUTE	3	
	OPEN AREA WITH MULTIPLE ESCAPE ROUTES FOR WORKERS	0	
		TOTAL SCORE:	

NOTE: American Association of State Highway and Transportation Officials (AASHTO)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION SUPPLEMENT

CEM-1303 (02/20/2026)

DISTRICT	EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT	COUNTY	ROUTE	BEGIN POST MILE	END POST MILE

Action to be taken based on total point score for the construction activity and location.

Score	Action to be Taken
36 or more	High Risk: Positive work zone protection devices required
20 – 35	Moderate Risk: Positive work zone protection devices must be used where possible, or mitigation measures are required to reduce worker exposure
Less than 20	Low Risk: Use standard temporary traffic control

POSITIVE WORK ZONE PROTECTION DETERMINATION

WORK ZONE INFORMATION

WORK ZONE NUMBER	ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)
	LOCATION		WORK ACTIVITY		STAGE/PHASE NUMBER

TOTAL SCORE

- ☐ Positive Work Zone Protection Required
- ☐ Positive Work Zone Protection or Mitigation Measures Required
- ☐ Standard Temporary Traffic Control Required

POSITIVE WORK ZONE PROTECTION

The following worker positive protection will be used on this contract:

- ☐ Temporary Concrete Barrier
- ☐ Steel Barrier
- ☐ Movable Barrier System
- ☐ Mobile Barrier System
- ☐ Stationary Impact Attenuator Vehicle

MITIGATION MEASURES

- ☐ Work Zone Speed Limit Reduction
- ☐ Expanded Work Windows
- ☐ Full Road Closure

MITIGATION MEASURES CONTINUED

The following mitigation measures will be used on this contract

- ☐ Buffer Lanes
- ☐ Construction Zone Enhanced Enforcement Program (COZEEP)
- ☐ Traffic Handling/Transportation Management Techniques
- ☐ Automated Flagger Assistance Devices
- ☐ Portable Changeable Message Sign Instead of Advance Flagger
- ☐ Traffic Breaks
- ☐ Accelerated Construction Techniques
- ☐ Portable Transverse Rumble Strips
- ☐ Intrusion Alarms

If positive work zone protection is not provided for rating score of 20-35 provide reason:

Reason:

EXCEPTION TO USE OF REQUIRED POSITIVE WORK ZONE PROTECTION (see Note)

Exception to not provide required positive work zone protection when rating score is 36 or more or when a required by policy or specifications:

Reason for exception to provide positive work zone protection:

NOTE: Exception must be approved by DEPUTY DISTRICT DIRECTORS OF TRAFFIC OPERATIONS and CONSTRUCTION. For encroachment permit projects managed through the EPOP, only approval by the DEPUTY DISTRICT DIRECTOR OF TRAFFIC OPERATIONS is required.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

POSITIVE WORK ZONE PROTECTION SUPPLEMENT

CEM-1303 (02/20/2026)

DISTRICT	EXPENDITURE AUTHORIZATION OR ENCROACHMENT PERMIT	COUNTY	ROUTE	BEGIN POST MILE	END POST MILE

POSITIVE WORK ZONE PROTECTION BASED ON ENGINEERING JUDGMENT

☐ Not Required

ROUTE	DIRECTION	BEGIN POST MILE	END POST MILE	DURATION (Days)

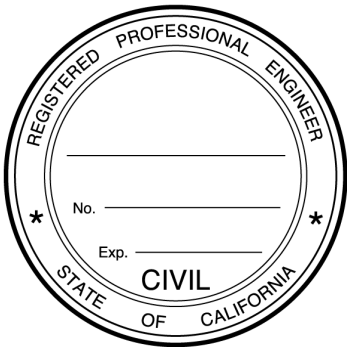
LOCATION	WORK ACTIVITY	STAGE/PHASE NUMBER

Reason for providing positive work zone protection:

Positive Work Zone Protection Provided:

ENGINEER POSITIVE WORK ZONE PROTECTION SUPPLEMENT

I have evaluated the project positive work zone protection and determined the appropriate requirements to incorporate into the contract as shown on this form.



_____

Registered Civil Engineer Date

SIGNATURE	PRINT NAME	DATE

AREA CONSTRUCTION SENIOR CONCURRENCE

SIGNATURE	PRINT NAME	DATE

MUST BE COMPLETED FOR EXCEPTIONS ONLY

DEPUTY DISTRICT DIRECTOR OF TRAFFIC OPERATIONS APPROVAL OF EXCEPTIONS

☐ Exception to not provide positive work zone protection is granted based on the reasons shown in the preceding pages.

SIGNATURE	PRINT NAME	DATE

DEPUTY DISTRICT DIRECTOR OF CONSTRUCTION APPROVAL OF EXCEPTIONS

☐ Exception to not provide positive work zone protection is granted based on the reasons shown in the preceding pages.

SIGNATURE	PRINT NAME	DATE

☐ Encroachment permit project managed through the EPOP, does not require deputy district director of Design concurrence and approval from the deputy district director of Construction.

INSTRUCTIONS

GENERAL INFORMATION

- This form is to provide documentation when an addition, revision or exception is required on a project for compliance with the policy for providing positive work zone protection.
- Positive work zone protection is required based on:
  - Caltrans policies and specifications
  - Protection for pedestrians and bicycles
  - Construction work zone activity engineering risk analysis
  - Engineering judgment
- Refer to Design Information Bulletin 91 “Guidelines on the Use of Positive Work Zone Protection (PWP) & Mitigation Measures.”

FORM (To be completed by the resident engineer or project sponsor.)

- **FROM:** Enter the name and title of the resident engineer or project engineer that prepared the positive work zone protection supplement.
- **DISTRICT:** Enter the district number of the project.
- **EXPENDITURE AUTHORIZATION:** Enter the project expenditure authorization or encroachment permit number for projects managed through the Encroachment Permits Office Process (EPOP).
- **COUNTY:** Enter the abbreviation for the county where the project is located.
- **ROUTE:** Enter the route number for the project.
- **PROJECT IDENTIFIER NUMBER:** Enter the project identifier number.
- **BEGIN POST MILE / END POST MILE:** Enter the begin and end post miles for the project limits.

WORK ZONE INFORMATION

- **WORK ZONE NUMBER:** Enter the work zone number from the original determination form with S added. For example, original work zone number was “23” supplement number is “23S.” For a new work zone enter number with “N,” example 44N.
- **ROUTE:** Enter the route number for the project.
- **DIRECTION:** Enter direction of travel.
- **BEGIN POST MILE / END POST MILE:** Enter the begin and end post miles for the project limits.
- **DURATION:** How many days will work activity affect traffic.
- **WORK ACTIVITY:** Enter the type of work activity for the entire project or phase/stage of the project.
- **LOCATION:** Enter general description of the location of the work.
- **STAGE/PHASE NUMBER:** For multiple work activities at the same location, enter the stage or phase number for the work activity.

SUPPLEMENT JUSTIFICATION

- **SUPPLEMENT TYPE:** Check the box that identifies the type of supplement.
- **BASIS FOR POSITIVE WORK ZONE PROTECTION:** Check the box that is the basis for the positive work zone protection that is being addressed by this positive work zone protection supplement.
- **REASON FOR SUPPLEMENT:** Provide the reason this positive work zone protection supplement is necessary.

- **POSITIVE WORK ZONE PROTECTION TO BE USED:** Enter the positive work zone protection that is going to be used based on this supplement.
- **MITIGATION MEASURE TO BE USED:** Enter the mitigation measure that is going to be used based on this supplement.

WORK ZONE ENGINEERING RISK ANALYSIS RATING

1. For each work zone activity, perform a work zone engineering risk analysis to determine if positive work zone protection, mitigation measures or standard traffic control is required. If “not required” is checked this section of the form will collapse.

   Work zone information should be self-populated by the form. If not self-populated, follow the instructions under the “WORK ZONE INFORMATION” heading above.

   Refer to Section 9.0 “PWP Engineering Analysis” of the Design Information Bulletin 91, "Guidelines on the Use of Positive Work Zone Protection (PWP) & Mitigation Measures," for how to perform the engineering risk analysis.

   For the work zone risk analysis, the definitions for work duration are:
   - Long-term stationary is work that occupies a location more than six months.
   - Long-term stationary work duration of three to six months.
   - Long-term stationary work duration more than three days and less than three months.
   - Intermediate-term stationary work at a location more than one daylight period up to three days, or night-time (hours of darkness per CVC Section 280 definition) work lasting more than one hour.
   - Short-term stationary daytime work that occupies a location for more than one hour within a single daylight period, short duration work that occupies a location up to one hour, or mobile is work that moves intermittently or continuously.

   For each factor of a work zone activity risk analysis, choose which condition best describes each work zone based on your risk assessment.
   - FACTOR 1: Check box for the estimated duration of the work activity.
   - FACTOR 2: Check box based on worker exposure.
   - FACTOR 3: Check box based on existing posted speed limit before construction or work activity.
   - FACTOR 4: Check box based on the traffic volume level of service.
   - FACTOR 5: Check box based on location of work.
2. Enter the points for each factor in the factor points column based on the condition box checked for the work zone activity.
3. Total the points from the five factors to determine the risk score for the work zone activity.

POSITIVE WORK ZONE PROTECTION DETERMINATION

- Based on the risk assessment rating total score, check the box for the required action to be taken:
  - 36 or more – Positive work zone protection is required.
  - 20–35 – Positive work zone protection must be used where possible or mitigation measure is required to reduce worker exposure.
  - Less than 20 – Standard temporary traffic control is required.
- **POSITIVE WORK ZONE PROTECTION:** Check the box of appropriate positive work zone protection devices to be included in the contract specifications and bid items.

- **MITIGATION MEASURES:** Check the box of appropriate mitigation measures that will be included in the contract specifications and bid items.
- **EXPOSURE CONTROL MEASURES:** If positive protection is not provided for rating of 20-35 provide reason positive protection is not feasible in the box provided.
- **EXCEPTION NOT TO USE REQUIRED POSITIVE WORK ZONE PROTECTION:** Provide reason for exception to not providing positive work zone protection when rating is 36 or more or when required by the policy or specifications in the box provided. Exceptions must be approved by the deputy district directors of Traffic Operations and Construction.

POSITIVE WORK ZONE PROTECTION BASED ON ENGINEERING JUDGMENT

- When use of positive work zone protection is based on engineering judgment document the reason the use of positive work zone protection is necessary and the type of positive work zone protection that will be used. The documentation must include the work zone location information and work activity.
- If "not required" is checked, this section of the form will collapse.
- Work zone information should be self-populated by the form. If not self-populated follow the instructions under work zone information.

ENGINEER POSITIVE WORK ZONE PROTECTION SUPPLEMENT

A registered professional engineer must seal project positive work zone protection supplement. For encroachment permit projects managed through EPOP< the project sponsor must sign and seal.

- **REGISTRATION SEAL:** Complete the registration seal by providing the name, of the engineer responsible for preparing the positive work zone protection supplement, their registration number and expiration date.
- **ENGINEER:** Signature and printed name of engineer that prepared the positive work zone protection supplement.
- **DATE:** Date signed.

AREA CONSTRUCTION SENIOR CONCURRENCE

Project positive work zone protection determination must be concurred by the area construction senior. For encroachment permit projects managed through the EPOP, the area construction senior must concur.

APPROVAL OF EXCEPTIONS (Section must be completed for exceptions only.)

- **APPROVAL:** Deputy district directors of Traffic Operations and Construction check the boxes for exception approval.
- **DEPUTY:** Deputy District directors sign and print their name.
- **DATE:** Date signed.

Note: For encroachment permit projects managed through the EPOP, only approval by the deputy district director of Traffic Operations is required.