



**EXHIBIT C**  
**OPERATING SYSTEM INTERFACE (OSI)**  
**(Third Party)**

**PART 1 - GENERAL**

**1.01 DESCRIPTION**

Outline for Contractor's interface with Caltrain's operating system, including track work, train control, and communications.

**1.02 DEFINITIONS**

- A. Caltrain:** AKA, The Peninsula Corridor Joint Powers Board (PCJPB) is a public agency comprised of three counties; San Francisco, San Mateo and Santa Clara, and is otherwise known as Caltrain.
- B. Amtrak:** Under contract with the PCJPB to operate and maintain the Caltrain system.
- C. Operating System:** Includes, but is not limited to, the tracks on which trains and on-track equipment operate or may potentially operate, and in addition any facilities closely related to the operation of the railroad system including signal and communication masts, bridges, poles, cables, signal houses, tunnels, culverts, grade crossings and station platforms and facilities.
- D. Operating Envelope:** Anywhere within Caltrain property including any area that is an essential component of the operating system.
- E. Work Window:** A designated period of time with a specific beginning and ending time for which the track, signals, bridges and other Operating System elements within the Operating Envelope are modified or temporarily removed from service to allow construction or maintenance work to occur. Written authority from Caltrain, and an approved Weekly Site Specific Work Plan (SSWP), is required before a Contractor is granted a Work Window. The Contractor's Work Window shall have specific geographic limits, which are defined in the approved SSWP. Modifications or suspension of train and on-track equipment movements resulting from a Work Window involves written changes to the Railroad's Rules of Train and On-Track Equipment Operations. These written changes are known as Track Bulletins and are categorized as follows.
  - (a) **Multiple Track Window:** An approved Work window in which passenger/ commuter and freight train service on two or more adjacent main tracks is suspended or halted. However, trains and on-track equipment associated with construction and maintenance activities may still operate on the tracks with suspended service but subject to the control of the Employee-in-Charge/ Flagman. Within rail corridors with three or more main tracks passenger/ commuter and freight train service may operate on the remaining main tracks subject to "Form B" restrictions. A "Form C" Track Bulletin will be issued by the Owner's Railroad Contract Operator/ Operating Railroad of Record to suspend or modify the train service on the two or more adjacent main tracks.

- (b) **Single Track Window:** An approved Work Window in which passenger/ commuter and freight service on a single main track is suspended or halted. However, trains and on-track equipment associated with construction and maintenance activities may still operate on the single main track with suspended service subject to the control of the Employee-in-Charge/ Flagman. Additionally, passenger/ commuter and freight train service will operate on the single main track or main tracks remaining in service subject to “Form B” restrictions. A “Form C” Track Bulletin will be issued by the Owner’s Railroad Contract Operator/ Operating Railroad of Record to suspend or modify the train service on the single main track removed from service. The limits of Single Track Windows will be a segment of track situated between the two nearest crossovers (universal or single). Single Track Windows within a track segment will not be allowed to extend beyond the limits of the two nearest crossovers, and in the case of more than one Single Track Window construction work will not be allowed on two adjacent track segments.
- (c) **“Form B” Work Window:** An approved Work Window in which passenger/ commuter, freight and all other trains and on-track equipment movements can be prohibited from entering the defined limits of a segment of track. The “Form B” Work Window does not allow the Contractor to remove from service or modify the tracks, signals, bridges, stations or other elements of the Operating System in a manner which will delay or in any way affect the safe operation of the trains. The “Form B” Work Window allows the Contractor the ability to enter the Operating Envelope and perform construction activities subject to the conditions above. An Employee-in-Charge/ Flagman from the Contract Operator will exercise strict control over the Contractor’s construction activities in conjunction with Roadway Worker Protection requirement to assure that the Contractor’s activities do not delay or impact train service.
- (d) **“Track and Time”:** A period of time on a particular segment of track for which the Control Operator (Train Dispatcher) grants exclusive usage to a qualified employee of the Railroad.
- (e) **Track and Time** will be granted by the Control Operator specifying the authority number, track limits and time. An employee (Flagman) granted Track and Time may occupy a track or tracks within the specified limits for the time period authorized. The limits of Track and Time are normally designated by Control Points (CPs). Track and Time is not normally used to protect work or trains for extended periods of time unless there are no other means readily available to do so.
- (f) **Exclusive Track Occupancy:** This refers to a method, such as those above, of establishing working limits on controlled track in which movement authority of trains and other equipment is withheld by the Control Operator or Train Dispatcher or restricted by a Flagman.

**F. Work Plan (WP):** A document submitted by the Contract, detailing the activities associated with a particular element of work. The Work Plan must include a description of the activity as well as the number of men and a list of the equipment required in the performance of the activity.

- G. Site Specific Work Plan (SSWP):** A program, plan, and schedule prepared and submitted by the Contractor two weeks prior to the proposed work and approved by the Engineer that accurately describes and illustrates the manner in which Work within the Operating Envelope will be accomplished, the impacts on any elements of the Operating System and the manner in which Work will be accomplished with the allotted Work Windows or protected period.
- H. Engineer/Project Manager:** Caltrain Engineer/Project Manager or other authorized representative.

### **1.03 WORK PLAN (WP)**

- A.** The Contractor will prepare a detailed Work Plan for each and every task associated with the work that is required by the Contract or any associated Field Instructions or Change Notices.
- B.** WP's shall include all activities necessary to perform construction tasks within the PCJPB Right of Way, including use of stations, sidings, temporary construction easements and proposed storage areas.
- C.** WP's shall include a description of any proposed changes to the Operating System between start and finish of the work, including any requested Work Windows.
- D.** The WP shall conform to all other requirements applicable to the Contract Documents.
- E.** The WP must contain a basic schedule of the work showing each activity and where and how it affects normal operation of the Operating System. Each activity in the plan shall include all labor, materials and equipment required to complete the activity within the PCJPB allotted time period.
- F.** The WP must include Contingency Plans for putting the Operating System back in operation in case of an emergency or in case the Contractor fails to complete the work within the Work Window. The Contingency Plans shall address the various stages of activities to restore the System.
- G.** The WP's must be of sufficient detail, clarity and organization to permit efficient review by the Engineer and approval at least 10 calendar days before the proposed work is performed. The WP shall be submitted to the Engineer as follows.
  - a) At least 21 calendar days prior to start of the subject work within the PCJPB Right of Way for work other than signal and overhead wire installation.
  - b) At least 30 calendar days prior of the start of the work for work involving signal and overhead wire installation, such as signal system cutover, overhead wire involving third parties, etc.

- H. The Engineer may request explanations and changes to the WP to ensure that it conforms to the requirements of the Contract Documents. If the WP is not acceptable, Contractor shall revise the WP to make it acceptable. The Contractor is responsible for submitting a revised WP that can be reviewed and approved by the Engineer at least seven (7) days in advance of any work within PCJPB Right of Way.
- I. The Contractor will be informed if the WP is acceptable not less than seven (7) calendar days prior to the scheduled start of work within the PCJPB Right of Way. Once the plan is accepted, Contractor shall muster the resources necessary to perform the work represented by the SSWP, so that necessary resources are available and ready for use, in general on the day which begins the week in which the work is to be accomplished. At this time, the Engineer will make a final decision as to whether or not the work is to proceed as planned or will be canceled. The prime consideration will be the stage of readiness of the Contractor, which the Contractor shall demonstrate to the Engineer.

#### **1.04 WEEKLY SITE SPECIFIC WORK PLAN (SSWP) Copy Included**

- A. In addition to Work Plans, the Contractor shall submit a Site Specific Work Plan (SSWP) on a weekly basis three weeks in advance of the proposed work. All SSWP's shall detail the proposed weekly events and activities, and include the Contractor's request for Work Windows. Approval of a WP or SSWP by the Engineer may require the placement of an appropriate protective divider (k-rail, snow fence, etc.) between construction operations and the operating system. Contractor shall furnish and install protective dividers as specified by the Engineer.
- B. The Contractor shall furnish all labor, materials, and equipment as required to perform and complete the work within the approved work window. The Contractor shall maintain the approved schedule in the SSWP.
- C. All work outlined in the SSWP with a potential to impact normal functioning of any part of the operating system shall include a detailed schedule of events indicating the expected hourly progress of each activity that has a duration of one hour or longer. The schedule shall include a time at which all activities planned under the SSWP will be completed. The SSWP shall also include the mobile phone numbers of individuals responsible for compliance with the approved SSWP. Failure of the Contractor to complete the scheduled activities by the planned time or to put in place an approved contingency plan may adversely impact the operations of Caltrain. In the event that Caltrain service is delayed by Contractor's actions, damage will be incurred. Liquidated damages will be assessed as described in Exhibit C-1 Working Procedures.
- D. The SSWP shall be a plan that describes the activities necessary to perform the work within the Operating Envelope and indicates which Work Plans will be utilized. The plan shall explain each activity along with the proposed schedule to complete each item. Each activity in the plan shall include all material and equipment required to complete the activity within the scheduled time period.
- E. The SSWP shall also include contingency plans for putting the system back in operation in case of an emergency or in case the Contractor fails to perform and complete the work on time. Contingency plans shall address the various stages of construction.
- F. The contractor shall have a copy of the current Caltrain schedule. Schedules are available at Caltrain Stations or on the Internet at [www.caltrain.com](http://www.caltrain.com).

- G.** The SSWP will be submitted to the Engineer for review no later than the opening of the business day on the Monday three (3) weeks before the proposed start of work within the Caltrain property. The Engineer may request explanations and changes to the SSWP, if the plan is not acceptable, the Contractor shall revise the plan accordingly.
- H.** The Contractor will be informed if the SSWP is acceptable not less than three (3) calendar days prior to the scheduled start of work. Once the plan is accepted, the Contractor will be prepared to perform the work represented by the SSWP.
- I.** References herein to weeks mean the week starting with Monday, and the next six (6) days of the proposed work schedule.
- J.** All work within Caltrain's property requires an SSWP approval by Caltrain.
- K.** No work will be permitted during weekday commute hours less than fifteen (15) feet horizontally from of the nearest rail until after 9:00 AM and prior to 3:00 PM. Work closer than fifteen (15) feet from the nearest rail may require a night or weekend schedule. Some work performed more than fifteen (15) feet horizontally from the nearest rail may be restricted to night and weekends when so required by the approved SSWP.
- L.** Materials and equipment shall not be piled, stored or parked when not in use closer than twenty-five (25) feet horizontally from the centerline of the nearest operating track.
- M.** The placement of piles, forms, braces, shoring, falsework or other construction supports shall be in accordance with the current State of California, Department of Transportation (Caltrans) Falsework Manual, PCJPB Standards Volumes 1 and 2, PCJPB Engineering Standards for Excavation Support Systems, and PUC General Orders 26-D and 118 as applicable.

Temporary overhead structures shall have a minimum vertical clearance of twenty-two (22) feet, six (6) inches above top of rail for all tracks and at any location under the structure. Temporary overhead structures with proposed vertical clearance less than twenty-two (22) feet, six (6) inches above top of rail must have an exemption from the California Public Utilities Commission (CPUC) and approval of Caltrain.
- N.** In general, open excavation areas shall be protected per OSHA regulations. Open excavation areas adjacent to operating tracks shall be protected by walkways with handrails no closer than eight (8) feet, six (6) inches horizontally from the nearest operating track, if tangent, and nine (9) feet, six (6) inches if track is curved.

#### **1.05 AVAILABILITY OF ACTIVE TRACKS:**

- A.** Exception: activities that have the potential to impact train operations and safety may be performed during work windows as shown in the chart(s) in Attachment A, "Work Windows". Active main line tracks and sidings are only available during work windows as shown on the Work Window chart and as approved by the Engineer.
- B.** The Contractor does not have exclusive rights to the Work Windows. The Contractor must share these Work Windows with other Contractors and current Owner's Contract Operator.
- C.** Track bulletins will begin not earlier than fifteen (15) days after the effective date of the Notice to Proceed (NTP).

## 1.06 CURRENT AND FUTURE CORRIDOR TRAFFIC

The following is a general summary of train traffic in the rail corridor:

### A. Mainline - Current Owner Commuter Operations and UPRR freight traffic

1. Weekday train service, both directions
  - Caltrain commute service per current timetable
  - 4 to 6 UPRR freight trains between 9 PM to 4 AM
2. Saturday train service, both directions
  - Caltrain commute service per current timetable
  - 2 to 3 UPRR freight trains
3. Sunday train service, both directions
  - Caltrain commute service per current timetable
  - 2 to 3 UPRR freight trains
4. Special Event Service
  - 3 to 4 trains each direction on days of San Francisco Giants Baseball home games
  - 3 to 4 trains each direction on days of Stanford Football home games
  - 3 to 4 trains each direction for other special events.
5. Other passenger rail carriers in accordance with their published timetables, including but not limited to Amtrak Intercity, Altamont Commuter Express (ACE), and Capital Corridor all of which operates in Santa Clara County segment.

### B. Mainline - Future Owner Commuter Operations and UPRR freight traffic

1. Owner's and other operator's commuter train traffic may vary in time and frequency over the course of the contract per published revisions to timetables.
2. UPRR freight traffic is subject to change without notice at the discretion of UPRR.

## 1.07 SAFETY

- A. Employees of the Contractor scheduled or expected to perform work within Caltrain Property are required to have successfully completed, within the last twelve (12) months, Caltrain's Roadway Worker Protection training program. The Contractor shall forward to Caltrain records of those successfully completing the course.
- B. **Roadway Worker Protection Act:** Contractor shall at all times comply with provisions of the Federal Rail Administration Regulation 49CFR214 (Roadway Worker Protection) as well as to the Permitter (Licensor) On-Track Safety Program.
- C. **Zero Tolerance:** The Caltrain/Amtrak Zero Tolerance Policy is attached and made a part hereof.
- D. The Contractor shall comply with the articles contained in the latest edition of the following publications from the PCJPB or its Operating Railroad of Record (ORR), currently Amtrak:

1. ORR Operating Timetable and Special Instructions
2. ORR General Code of Operating Rules for Maintenance of Way
3. ORR General Orders
4. ORR Maintenance of Way General Orders
5. PCJPB Caltrain On-track Safety Plan
6. PCJPB Passenger Timetable
7. PCJPB Standard Procedures for Track Maintenance and Construction

All publications listed above are available on the Caltrain website, [www.caltrain.com](http://www.caltrain.com), or available upon request from PCJPB. The Contractor shall comply with the more stringent rule when conflicts occur between these publications.



## **ZERO TOLERANCE**

### **JOINT POLICY STATEMENT**

### **ROADWAY WORKER PROTECTION AND PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS UPON ENTERING CALTRAIN RIGHT-OF-AWAY**

*Amended 7/15/04*

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**Every individual performing work or service on the Peninsula Corridor Joint Powers Board right of way is both entitled to and responsible for a safe working environment. Each individual's Personal Protective Equipment (PPE) is an essential part of the Safe Working Environment. The objective of this "Zero Tolerance" policy statement is to set clear, concise and minimum safety standards for Roadway Worker Protection (RWP) and Personal Protection Equipment (PPE) compliance on the Caltrain system. The staffs of Amtrak/PCS and Caltrain fully support all elements of this policy.**

**Bob Doty  
Director Rail Transportation  
Caltrain**

**Jay Commer  
General Manager  
Amtrak/PCS**

**Darrell Maxey  
Chief Engineer  
Caltrain**

**Steve Hill  
Director of Construction  
Caltrain**

## **I. General**

1. The effective date of the “Zero Tolerance” policy shall be March 1, 2001.
2. All applicable employees of the PCJPB and its contract operator Amtrak as well as applicable employees of PCJPB or Amtrak contractors shall be subject to the Zero Tolerance Policy for RWP and PPE after the effective date.
3. The employees of any PCJPB or Amtrak contractor, agency, or other entity entering upon Caltrain right-of-way under a right-of-entry agreement shall be subject to the Zero Tolerance policy for PPE after the effective date.
4. For all work groups subject to RWP requirements the “Employee in Charge of On-track Safety” shall be responsible for overseeing the enforcement of 49 CFR Part 214 which includes the use of PPE. For all contractors entering upon Caltrain right-of-way under a right-of –entry, the Flagmen or Employee in Charge of Safety shall be responsible for overseeing the enforcement of Caltrain PPE requirements and all other applicable right-of-entry requirements. The “Employee in Charge of On-track Safety” or Flagman shall check for PPE during the initial job briefing. The “Employee in Charge of On-track Safety” shall not allow anyone to work within his/her workgroup until all RWP and PPE requirements are met.
5. For Lone Workers, verbal acknowledgement that the Lone Worker is equipped with each required item of PPE shall be a part of the job briefing.
6. For persons working at mechanical maintenance facilities, each supervisor conducting the daily job briefing shall check all employees for proper PPE. No person shall be allowed to commence work without proper PPE.
7. Any supervisor or manager of any group or organization working on PCJPB right of way may set more stringent standards for their own employees.

## **II. Minimum Requirements for Personal Protective Equipment**

### **1. Safety Glasses:**

- All persons performing Roadway Worker or entering the right-of-way under a right of entry, mechanical, work train, maintenance and inspection service/work on Caltrain property shall wear prescribed eye protection.
- Definition and requirements for eye protection: All eye protection must meet ANSI standard 87.1 with proper side-shield protection.
- Prescription eyewear must also meet these standards. It is highly recommended that those individuals wearing prescription eyewear obtain prescription eyewear meeting ANSI standard 87.1 in lieu of wearing safety eyewear over prescription eyewear.

### **2. High Visibility Reflective Clothing**

- Persons working or performing service on the PCJPB right of way must wear fluorescent colored clothing (jackets, shirts, or vests) with permanently attached reflective strips on their upper body. (Exception: employees in maintenance facilities, transportation employees performing passenger service, or persons working inside (indoors) of stations.

### **3. Hardhats**

- Hardhats may be of any style but must meet ANSI standards and be worn at all times while working on the PCJPB right of way. (Exception: Transportation employees performing passenger service.)

### **4. Shoes/Height/Toe**

- Appropriate shoes must be worn for each type of work. Shoes must have adequate ankle support and a sturdy sole. Tennis shoes, jogging shoes, sport shoes, and open toe shoes are prohibited. Steel-toed or safety-toed approved boots with sufficient ankle support (6-inch min. 8-inch. recommended) are recommended at construction sites.

(Exception: Transportation employees involved in passenger service and persons whose jobs call for flat sole shoes such as paving crews.)

In order for this policy to be enforceable, each agency, department, contractor, and consultant shall arrange for easy access to required PPE. Each agency, department, contractor, and consultant will individually decide on the method for issuing PPE.

## **III. Roadway Worker Protection Infractions**

### **Consequences of Non-compliance**

Individuals who are determined to be non-compliant with RWP or PPE shall be subject to the following consequences:

- First infraction - individual or work group will be asked to clear foul zone. A written warning shall be delivered to the appropriate individual, the individual's supervisor and appropriate JPB manager as stated above.
- Second infraction - 24 hours banned from the Caltrain right-of-way with re-training within seven (7) days of infraction.
- Third infraction – three (3) days banned from Caltrain right-of-way.
- Fourth infraction – banned from Caltrain right-of-way for one year.

Each infraction of not having evidence of training will be governed under the following:

- Instant removal from the Caltrain right-of-way.

## **IV. Policy Enforcement**

Policy enforcement concerning infractions of this policy shall be referred to and handled by:

1. For Caltrain/SamTrans Engineering/Consultants/Contractors and Subcontractors: Referred by phone or in writing within seventy-two (72) hours to SamTrans Safety Officer of Rail and Project Manager.

2. For Caltrain/SamTrans Rail Services and their Contractors: Referred by phone or in writing within seventy-two (72) hours to SamTrans Safety Officer of Rail and, Director of Rail Services.
3. For SamTrans General Administration employees: Referred by phone or in writing within seventy-two (72) hours to SamTrans Safety Officer of Rail.
4. For Amtrak employees and their Contractors/Subcontractors: Referred by phone or in writing within seventy-two (72) hours to Amtrak Safety Manager and General Manager at Amtrak.
5. For All Third Party Contractors: Referred to by phone or in writing within seventy-two (72) hours SamTrans Safety Officer of Rail, appropriate Project Manager and their Supervisors.
6. For All Utility, Municipal, Communication, and leaseholders: Referred by phone or in writing within seventy-two (72) hours to SamTrans Safety Officer of Rail and appropriate person.



Peninsula Corridor Joint Powers Board (PCJPB), P. O. Box 3006 (1250 San Carlos Ave.), San Carlos, CA 94070-1306,  
Engineering Department, (650) 508-7968, FAX (650) 508-7967

### SITE SPECIFIC WORK PLAN (SSWP) APPLICATION

SSWP APPLICATION \_\_\_\_\_ JPB Project #: \_\_\_\_\_ SSWP Submittal #: \_\_\_\_\_

APPLICANT: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX:: \_\_\_\_\_

LOCATION of PROJECT \_\_\_\_\_

PROJECT SITE CONTACT: \_\_\_\_\_

DATE(S):REQUESTED: \_\_\_\_\_ DAILY WORK HOURS REQUESTED: \_\_\_\_\_

CLEARANCE TO NEAREST RAIL OF OPERATING TRACK: \_\_\_\_\_

DESCRIPTION OF WORK TO BE PERFORMED: \_\_\_\_\_

EQUIPMENT TO BE USED IN THE CONSTRUCTION: \_\_\_\_\_

EXCAVATION WITHIN THE RAILROAD ZONE OF INFLUENCE: YES  NO   
IF SO APPROVED SHORING ATTACHED: YES  NO

SAFETY CONSIDERATIONS: \_\_\_\_\_

**All personnel working on project shall be JPB RWP Safety Trained per FRA Regulations**

**NOTE:**

- RETURN COMPLETED FORM TO THE PCJPB, FAX (650) 508-7967, BY 4:00PM ON TUESDAY THREE WEEKS PRECEEDING WORK (EVERY WEEK, WEEKS BEGIN ON MONDAY) IN ORDER TO SCHEDULE INSPECTION AND/OR FLAGMEN.**
- WORK REQUIRING SHORING MUST INCLUDE ALL SHORING DRAWINGS STAMPED AND APPROVED BY A REGISTERED CIVIL ENGINEER AND BEAR THE APPROVAL OF THE JPB.**
- FAILURE TO COMPLETE THIS FORM ACCURATLEY MAY BE CAUSE FOR THIS PROJECT TO BE DELAYED OR SHUT DOWN.**

\_\_\_\_\_  
APPLICANT NAME (PLEASE PRINT)

\_\_\_\_\_  
SIGNATURE