

PROPOSED RESOLUTION

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SAFETY AND ENFORCEMENT DIVISION
RAIL TRANSIT SAFETY BRANCH

Resolution ST-218
March 28, 2019

RESOLUTION

RESOLUTION ST-218 GRANTING APPROVAL OF THE
SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT
SAFETY AND SECURITY CERTIFICATION PLAN FOR THE
HAYWARD MAINTENANCE COMPLEX PROJECT -
PHASE 2

SUMMARY

This Resolution grants the request of the San Francisco Bay Area Rapid Transit District for approval of the Safety and Security Certification Plan for the Hayward Maintenance Complex Project Phase 2.

BACKGROUND

Commission General Order 164-E, *Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems, Section 11*, Requirements for Safety Certification Plan, requires that each Rail Transit Agency (RTA) prepare a project-specific Safety and Security Certification Plan (SSCP) for each major project and ensure that all entities involved in design, construction, operation, and maintenance of the project comply with the safety certification process.

The purpose of the SSCP is to describe organizational authority and responsibilities, safety certification activities and processes, and documentation requirements and responsibilities. The SSCP lists safety

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critical items and activities that require verification such as safety equipment functionality testing and safety-related operational and/or maintenance training. In accordance with General order 164-E, Section 10, a Safety Certification Verification Report (SCVR) is issued by the RTA at project completion as verification of SSCP compliance. The SCVR must be approved by Commission staff before the project can be placed in service.

On August 1, 2018, the San Francisco Bay Area Rapid Transit District (BART) submitted its plan titled "Safety Certification Plan for the Hayward Maintenance Complex Project Phase 2" to staff for review and requested Commission approval.

Staff reviewed and analyzed the BART SSCP and found that it meets SCP requirements set forth in General Order 164-E and Rail Transit Safety Branch (RTSB) Program Management Standard Procedures Manual, State Safety and Security Oversight of Rail Fixed Guideway System, Section 9.

DISCUSSION

The San Francisco Bay Area Rapid Transit District (BART or the District) is a high-speed inter-city and metropolitan rail transit system. The District operates and maintains 121 miles of track in revenue service and 48 stations, serving an average of 420,000 passenger trips every weekday in the counties of San Francisco, Alameda, Contra Costa, and San Mateo. The Hayward Yard is one of four BART maintenance facilities serving the BART system. Over the next 30 years, BART will require additional vehicles to meet future demand associated with regional population growth, system expansion for Warm Springs and Silicon Valley/San Jose Extension projects, and additional riders from the Oakland Airport Connector, and eBART projects. Accordingly, BART requires expanded maintenance and storage facilities to serve the expanded fleet.

The proposed Hayward Maintenance Complex Phase 2 project includes the following key items:

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- **Additional storage tracks (East storage yard)** – allows for a maximum of 250 vehicles on undeveloped BART property on the east side of the existing Hayward Yard.
- **Facilities** – (car cleaning and cart charging, traction power substation (TPSS)/train control equipment room, and an operations facility) needed for day-to-day yard operations.
- **Southbound flyover structure** – allows trains to be dispatched from the East storage yard to the south towards San Jose. Flyover structure will be built over several existing tracks (Pit Track (PT), Hayward Test Track (HTT), A-Line (A1 and A2), and Hayward yard-leads (TF08 and YL08).
- **Cart/personnel overcrossing structure** to allow for the movement of carts and personnel between the existing Hayward Maintenance complex and the East storage yard.

The Project will be implemented in phases. The phases are as follows:

- **Track work Procurement** - Procurement of long-lead time items such as special track work, ties, and rails.
- **Civil Grading** – Rough grading of the East storage yard site. Includes design and construction of the five retaining walls required to support the guideway. Underground conduits (e.g. utilities, BART facilities, lighting) will be installed as part of this phase.
- **East Storage Yard** – Includes design and construction of the southbound flyover structure along with miscellaneous facilities (e.g. car cleaning and cart charging facility, traction power substation, and operational facilities), and systems (e.g. traction power and train control).
- **Southbound Flyover** – Includes design and construction of the southbound flyover structure along with miscellaneous facilities (e.g. car cleaning and cart charging facility, traction power

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substation, and operations facilities), and systems (e.g. traction power and train control).

Project Safety Certification

The District's SCP describes the processes, responsibilities, documentation, and procedures needed for certification. Additionally, it provides a framework for ensuring that appropriate safety and security related activities have been performed and documented to support each Certificate of Conformance (COC) issued. The plan may be revised and expanded as the project progresses.

The SCP objectives are to ensure that the following safety requirements have been satisfied:

1. Facilities, systems, and equipment have been designed, constructed, installed, inspected, tested in accordance with applicable codes, and industry standards.
2. Plans, procedures, rules, and other documentation have been adequately developed, reviewed and modified, as necessary.
3. The District's Operations and Maintenance personnel have been trained and are certified to perform their respective functions.
4. Emergency response agencies have been adequately prepared and drilled to respond to emergency situations on the system.
5. Identified hazards have been eliminated or controlled to acceptable levels.
6. Construction work has been analyzed and hazards associated with the work identified.
7. Appropriate mitigating safety measures, rules, and procedures have been developed to address the identified hazards.

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8. Mitigating safety measures, rules, and procedures are incorporated into appropriate contract documents.

BART, through the Project Team, is responsible for self-certifying the safety and security of the BART Hayward Maintenance Complex – Phase 2 Project and for providing evidence of safety and security certification to the CPUC prior to commencement of revenue service. BART, in turn, will require Certificates of Conformance and supporting documentation (checklist, test results, etc.) from the applicable BART Project Team, Consultants, and Contractors responsible for ensuring conformance with identified safety and security requirements. When all required system elements are certified, key safety and security certification documentation will be issued to the CPUC in the form of a SCVR.

The certification program scope encompasses safety and security certification of the facilities, systems and equipment, safety related procedures, training programs, and hazard resolution activities for the Hayward Maintenance Complex – Phase 2 Project. The project can be categorized into distinct progress factors throughout the advancement of the project. Specifically, certification focuses on six “Certifiable Factors”:

Certifiable Factors:

1. Design Criteria Conformance
2. Specification Conformance
3. Safety related Testing Conformance
4. Hazard Analysis Conformance
5. Plans, Rules, and Procedures Conformance
6. Training Conformance

Some or all of the six Certifiable Factors will apply to each of the four different major components for this contract, which are referred to as the

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“Certifiable Elements.” Specifically, the four certifiable elements and their sub-elements are listed below:

1. Guideway
 - a. Trackwork
 - b. Flyover structure
 - c. Retaining walls
2. Traction power system
3. Train control system
4. Facilities
 - a. Car cleaner and cart charger facility
 - b. TPSS and train control equipment room
 - c. Operations facility
 - d. Cart/personnel overcrossing structure

Certificates of conformance required for the various components necessitate the performance of a variety of system safety, fire/life safety, and security activities. The activities may be performed either independently or integrated with other tasks such as acceptance testing or quality control measures. Regardless of whether the activities are performed independently or integrated with others, adequate system safety, fire/life safety, and security activity records must be developed and maintained as evidentiary support for the Certificates of Conformance.

A preliminary hazard analysis will be performed of the construction work prior to the beginning of construction. Construction safety work programs such as Site-Specific Work Plans (SSWPs) and Interim Operating Plans (IOPs) will be reviewed to include detailed work schedule, cut-in requirements, construction/installation contingency plans, strategies to minimize impact on revenue operations and procedures to describe how

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revenue service is to be restored. This process will ensure safe, uninterrupted train operations during construction.

The SSCP will be updated as required. Changes may be proposed by a department and submitted in writing to the Chief Safety Officer for review and consideration.

The Hayward Maintenance Complex Phase 2 Project Manager and BART Safety Officer will approve minor changes. Major changes will require thorough review and approval by all signature authorities of the SSCP. The BART Safety Officer shall submit any revisions of the SSCP to the CPUC Staff for approval, in accordance with General Order 164-E, Section 11.3.

Staff reviewed the HMC Project SSCP in accordance with General Order 164-E Section 11, *Requirements for Safety Certification Plan*, as well as the SCP checklist in the RTSB Program Management Standard Procedures Manual, Section 9. The SSCP is in compliance with General Order 164-E and staff recommends that the Commission grant approval of the BART HMC Project SSCP.

NOTICE

On February 8, 2019, this Resolution was published on the Commission's Daily Calendar.

COMMENTS

The draft resolution of the Safety and Enforcement Division in this matter was mailed in accordance with Section 311 of the Public Utilities Code and Rule 14.2(d)(1) of the Commission's Rules of Practice and Procedure.
_____ comments were received.

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FINDINGS

1. On August 1, 2018, the San Francisco Bay Area Rapid Transit District submitted the SSCP for the BART Hayward Maintenance Complex Project Phase 2 for staff review and requested Commission approval.
2. The BART Hayward Maintenance Complex Project Phase 2 will include the following key items: additional storage tracks (East storage yard), facilities, southbound flyover structure, and cart/personnel overcrossing structure.
3. The Project will be implemented in phases which include trackwork procurement, civil grading, east storage yard, and southbound Flyover.
4. This SCP identifies the process by which the project will be certified as meeting the established safety and security criteria and standards to operate in revenue service.
5. Staff reviewed and analyzed the content of the SSCP in accordance with the RTSB Program Management Standard Procedures Manual, State Safety and Security Oversight of Rail Fixed Guideway System (Program Standard), Section 9. Staff found it to be in accordance with Section 9 of the RTSB Program Standard, as well as the requirements set forth by General Order 164-E, Section 11.
6. The BART Hayward Maintenance Complex Project's SSCP will be updated and revised as necessary, as the project progresses, upon staff's approval.

THEREFORE, IT IS ORDERED THAT:

1. The request of the San Francisco Bay Area Rapid Transit District for approval of the Safety Certification Plan for the BART Hayward Maintenance Complex Phase 2 is granted.

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2. The San Francisco Bay Rapid Transit District shall file revisions of the Safety Certification Plan with Commission staff for review and approval.
3. The San Francisco Bay Rapid Transit District shall submit the Safety and Certification Verification Report to CPUC staff as required by the Commission General Order 164-E, Section 12, at least 21 days prior to incorporating the facility into the operations of revenue service.
4. This resolution is effective today.

I certify that this resolution was adopted by the Public Utilities Commission at its regular meeting held on March 28, 2019. The following Commissioners voting favorably thereon:

ALICE STEBBINS
Executive Director