



## STAFF REPORT

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**DATE:** October 26, 2020  
**TO:** Sacramento Regional Transit Board of Directors  
**FROM:** Lisa Hinz, VP, Safety, Security and Customer Satisfaction  
**SUBJ:** APPROVING THE PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (PTASP)

### RECOMMENDATION

Adopt the Attached Resolution.

### RESULT OF RECOMMENDED ACTION

If approved by the Board, SacRT will be in compliance with Federal Transit Administration Regulations (49 C.F.R. Part 637) and with the California Public Utilities Commission General Order 164-E requiring public transit agencies like SacRT to adopt a Public Transportation Agency Safety Plan (PTASP) no later than December 31, 2020.

### FISCAL IMPACT

There is no fiscal impact with approving the Plan, however the future safety needs will have a financial impact and will be incorporate into the budget process.

### DISCUSSION

SacRT's Public Transportation Agency Safety Plan (PTASP) is developed in accordance with Federal and State mandates that require SacRT to establish and implement such a plan. The regulations require the PTASP to be approved by the Board of Directors.

The Federal Transit Administration (FTA) published the PTASP Regulation, 49 C.F.R. Part 673, on July 19, 2018. The regulation implements a risk-based Safety Management System (SMS) approach and requires SacRT to have a PTASP in place no later than December 31, 2020. The PTASP is one element of the FTA's comprehensive Public Transportation Safety Program. SacRT's State Safety Oversight Agency, the California Public Utilities Commission (CPUC) adopted the requirements of FTA's regulation in its General Order 164-E and is charged under the regulations with the review and approval of agency PTASPs.

The PTASP explains SacRT's safety processes. The plan is a data driven approach to manage hazards and includes performance measures and targets. A plan is coordinated with internal stakeholders and the stakeholders will be provided with training.

The PTASP must be based on Safety Management System (SMS) Principles. The four components to SMS are: safety management policy, safety risk management, safety assurance and safety promotion.

The safety management policy assigns authorities, accountabilities and responsibilities for all SacRT staff. There must also be integration with Emergency Management and SMS documentation and records.

Safety risk management is the safety hazard identification process. This process also includes safety risk assessment and safety risk mitigation.

Safety assurance is the safety performance monitoring and measurements process. This includes management of change and continuous improvement. Examples of performance measurements are reportable injuries, reportable safety events and system reliability rail (meaning distance between major mechanical failures).

Safety promotion is the safety training program and safety communication.

Staff worked with the Rail Transit Safety Branch of the CPUC during the development of the PTASP and submitted the final draft PTASP to the CPUC for preliminary approval of the plan. Once the plan is in effect, staff will regularly audit the plan to verify the processes and programs are being followed and based on trends, implement strategies for continuous safety improvement. In addition to internal audits, the PTASP will also be audited by the FTA and the CPUC at least triennially.

Staff recommends that the Board adopt the PTASP for SacRT.

RESOLUTION NO. 20-10-0125

Adopted by the Board of Directors of the Sacramento Regional Transit District on this date:

October 26, 2020

**APPROVING THE PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (PTASP)**

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE BOARD OF DIRECTORS OF THE SACRAMENTO REGIONAL TRANSIT DISTRICT AS FOLLOWS:

THAT, the Board hereby adopts the Public Transportation Agency Safety Plan as depicted in Exhibit A.

\_\_\_\_\_  
STEVE HANSEN, Chair

A T T E S T:

HENRY LI, Secretary

By: \_\_\_\_\_  
Cindy Brooks, Assistant Secretary



# Regional Transit

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## PUBLIC TRANSPORTATION AGENCY SAFETY PLAN

October 2020





# Public Transportation Agency Safety Plan

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### **Accountable Executive Statement**

Safety is recognized as a core value in Sacramento Regional Transit (SacRT) and impacts everything we do. I commit to championing culture of safety from the “top down” and will continue to demonstrate through my actions my commitment to safety and its importance in the success of our agency and the health and wellbeing of our employees and customers.



## Public Transportation Agency Safety Plan

Our safety culture is founded upon these guiding principles:

- J The team at SacRT relies on a high degree of trust and respect between staff and management. Everyone at SacRT has my promise that they will be supported in all decisions made in the interest of safety.
- J SacRT embodies a positive safety culture that is fostered by management and shared by all employees. This positive safety culture is critical for the effective operation of our Safety Management System.
- J SacRT recognizes safety as one of the organization's primary core values and is continually promoted by the senior management team.
- J The ongoing pursuit of an accident-free workplace, including no harm to people and no damage to equipment, the environment or property.

### **Non-Punitive Reporting Policy**

SacRT embodies a culture of open reporting of all safety hazards in which management will not initiate disciplinary action against any personnel who, in good faith, discloses a hazard or safety occurrence due to unintentional conduct. This policy applies to all personnel acting in accordance with agency procedures and/or regulations. Personnel willfully acting outside of stated agency policy, regulations, or in commission of criminal acts will be subject to appropriate disciplinary action.

### **Summary**

Public Transportation Agency Safety Plan (PTASP) is a vital tool to link safety through all elements of our operations with clear direction and visibility, allowing us to maintain the high level of safety we all take pride in. As the SacRT PTASP evolves, we will maintain an open and constructive working environment that supports continuous improvement and operational excellence throughout all levels of our organization.

---

Henry Li

General Manager

Date:





Public Transportation Agency Safety Plan

**SacRT Board of Directors Approval**

(Adoption Anticipated October 2020)



## Public Transportation Agency Safety Plan

### Introduction to Sacramento Regional Transit System

#### *Overview*

SacRT is governed by an 11-member Board of Directors comprised of members of the Sacramento, Citrus Heights, Elk Grove, Folsom and Rancho Cordova city councils as well as the Sacramento County Board of Supervisors.

#### **General Overview and History of SacRT**

SacRT is divided into nine (9) divisions: Operations, Administrative Services/EEO, Finance, Marketing and Communications, Facilities & Business Support Services, Engineering and Construction, Planning/Transit System Development, Legal, and Security, Safety, and Customer Satisfaction.

The Public Transportation Safety Agency Plan (PTASP) applies to all organizational units affecting, or affected by, the SacRT Light Rail system throughout operations and maintenance phases. The PTASP addresses SacRT rail system planning, design, construction, procurement, installation, pre-revenue testing, safety certification and startup. The Security and Emergency Preparedness Program Plan (SEPPP) is a separate program and is handled by SacRT's Police Services Department for issues pertaining to security.

SacRT employs a work force of approximately 1,300 people, 80 percent of whom are dedicated to front-line operations and maintenance of the bus and light rail systems. SacRT operates seven maintenance and operations facilities: one for bus, three for Community Bus Services (Folsom Stage Line, SmARt Ride and SacRT GO) and two locations for light rail. SacRT also operates and maintains e-tran and e-van services in the City of Elk Grove

The Sacramento Regional Transit District (SacRT) operates 30 fixed routes, 19 commuter routes, 17 seasonal routes in addition to nine SmARt Ride on-demand microtransit service zones, ADA paratransit service (SacRT GO), Airport Express bus service (temporarily suspended due to ridership impacts from the COVID-19 pandemic), UC Davis service (Causeway Connection), and 43 miles of light rail that covers a 400 square-mile service area.

SacRT buses and light rail trains operate 365 days a year using 97 light rail vehicles, 186 buses powered by compressed natural gas (CNG), six zero emission electric buses, 26 shuttle buses powered by CNG, nine zero emission electric shuttle buses, and 120 ADA paratransit vehicles. Buses operate daily from 5 a.m. to 11 p.m. every 12 to 60 minutes, depending on the route. Light rail trains begin operation at 4 a.m. with service every 15 minutes during the day, and every 30 minutes in the evening and on weekends. Blue Line and Gold Line trains operate until approximately 12:30 a.m. and the Gold Line to Folsom operates until 11:30 p.m. Green Line trains operate every 30 minutes Monday through Friday from approximately 6 a.m. to 8:30 p.m. (no weekend or holiday service).

Passenger amenities include 52 light rail stations, 30 bus and light rail transfer centers and 22 park-and-ride lots. SacRT also serves over 3,100 bus stops throughout Sacramento County.

Annual ridership has fluctuated recently on both bus and light rail systems and has grown from 14 million passengers in 1987 to over 21 million passengers in FY19. Weekday light rail ridership averages approximately 37,500 passengers per day. Bus weekday ridership has reached an average of approximately 35,000 passengers per day (note: during the COVID-19 pandemic due to shelter in



## Public Transportation Agency Safety Plan

place orders, distance learning and telecommuting, ridership is averaging around 40% and growing every month).

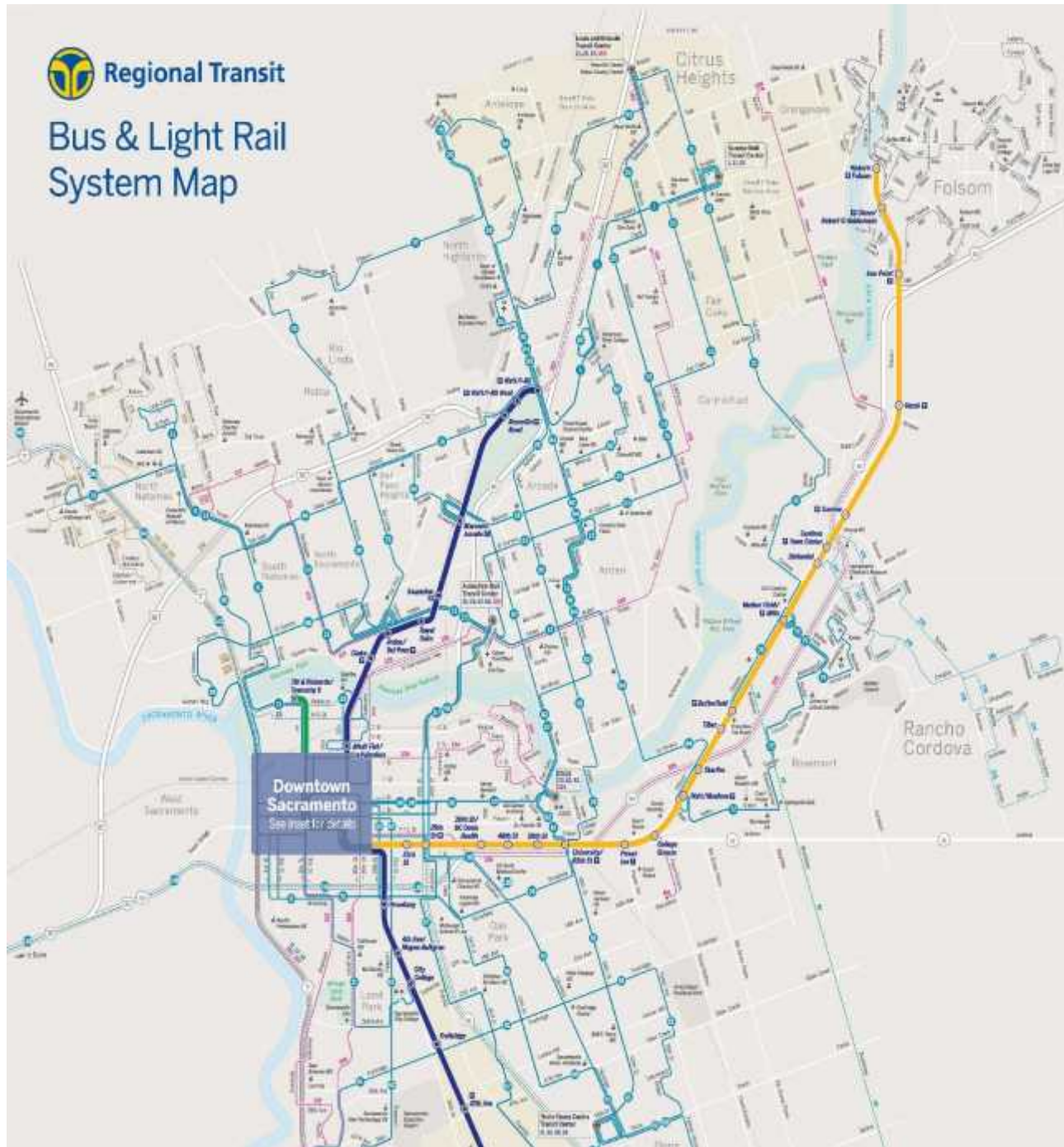
SacRT's entire bus and light rail system is accessible to the disabled community. SacRT GO paratransit service also provides a door-to-door transportation service (in accordance with its responsibilities under the Americans with Disabilities Act) for Sacramento area residents who are unable to use fixed-route service.

With a total of nine active SmaRT Ride service zones, SacRT is the largest microtransit provider in the country, operating with 45 shuttle buses. SmaRT Ride service is on-demand using an app, website or phone, and operates in the communities of Arden, Carmichael, Citrus Heights, Downtown-Midtown-East Sacramento, Folsom, Franklin- South Sacramento, Gerber-Calvine, North Sacramento and Rancho Cordova, with a focus on serving disadvantaged communities.

The Causeway Connection electric bus service operates Monday through Friday from 5:30 a.m. to 8:50 p.m. between the cities of Davis and Sacramento. When in service, the Airport Express bus operates from downtown Sacramento to the Sacramento International Airport every 20/30 minutes, seven days a week.

*Operations*

**The operational SacRT Rail System Map:**





**Blue Line**

Trains stop at every station on the Blue Line and travel the entire line between the Watt/I-80 Station and the Cosumnes River Station. Minimum scheduled headways are 30 minutes. Maximum scheduled headways are 15 minutes during peak hours. Service is provided from 3:53AM to 12:59 AM weekdays, 5:26 AM to 12:59 AM Saturdays, 4:57 AM to 10:59 PM on Sundays and holidays.

**Gold Line**

Trains stop at every station and travel the entire line between the Sacramento Valley Station at Amtrak and the Historic Folsom Station. Minimum scheduled headways are 30 minutes. Maximum scheduled headways are 15 minutes during peak hours. Service is provided from 3:49 AM to 12:25 AM weekdays, 4:49 AM to 12:25 AM on Saturdays, and 4:50 AM to 10:25 PM on Sundays and holidays.

**Green Line**

Trains stop at every station on the Green Line and travel the entire line between the Township 9 Station and the 13th Street Station. Scheduled headways are 30 minutes and service is provided from 5:59 AM to 8:49 PM on weekdays only. There is no Saturday, Sunday or holiday service.

## Public Transportation Agency Safety Plan

### Definitions:

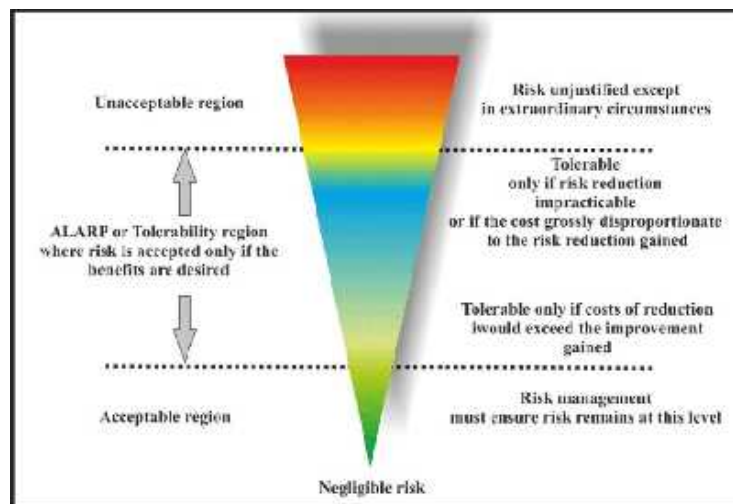
*Accident* means an Event that involves any of the following: A loss of life; a report of a serious injury to a person; a collision of public transportation vehicles; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.

*Accountable* The one ultimately answerable for the correct and thorough completion of the deliverable or task, the one who ensures the prerequisites of the task are met and who delegates the work to those responsible. An accountable must sign off or approve work that responsible provides. There must be only one accountable specified for each task or deliverable.

*Accountable Executive* means a single, identifiable person who has ultimate responsibility and accountability for the implementation and maintenance of the Public Transportation Agency Safety Plan (PTASP) of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management (TAM) Plan; and control or direction over the human and capital resources needed to develop and maintain both plans.

*Application Program Interface (API)* is a computing interface exposed by a software program, library, operating system or internet service, to allow third parties to use the functionality of that software application.

*As Low as Reasonably Practicable (ALARP)* is a term often used in the regulation and management of safety-critical and safety-involved systems. The ALARP principle is that the residual risk shall be reduced as far as reasonably practicable.



*California Highway Patrol (CHP)* inspects and oversees bus vehicle safety, and operator licensing.

*California Public Utilities Commission (CPUC)* serves as the State Safety Oversight Agency (SSOA) for the FTAs rail-related operations.

*Certifiable Elements List* means a list that contains all facilities, systems, rail at-grade crossings, and other items that are subject to safety certification due to their safety functions.

*Chief Safety Officer* means an adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer. A Chief Safety Officer may not serve in other operational or maintenance capacities, unless the



## Public Transportation Agency Safety Plan

Chief Safety Officer is employed by a transit agency that is a small public transportation provider as defined in 49 CFR Part 673, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

*Consult* Those whose opinions are sought, typically subject-matter experts; and with whom there is two-way communication.

*Contractor* means an entity that performs tasks required on behalf of the Commission or Rail Transit Agency (RTA).

Corrective Action Plan (CAP) means a plan developed by an RTA that describes the actions the RTA will take to minimize, mitigate, control, correct, or eliminate hazards, and the schedule for implementing those actions.

*Event* means any Accident, Incident, or Occurrence.

*Existing Industry Standards* means the currently accepted industry and professional engineering standards and/or guidelines relating to the design, construction, operation, and maintenance of Rail Fixed Guideway Systems such as ANSI, APTA, AREMA, ASCE, ASEE, ASME, FRA, FTA, IEEE, NFPA, and others.

*FRA* means the Federal Railroad Administration.

*FTA* means the Federal Transit Administration.

*General Orders* means rules established by the California Public Utilities Commission (CPUC).

*Hazard* means any real or potential condition (as defined in the RTA's hazard management process) that can cause injury, illness, or death; damage to or loss of a system, equipment or property; or damage to the environment.

*Hazard Analysis* means any analysis performed to identify hazards or safety risks for the purpose of their elimination, mitigation, or control.

*Incident* means an event that involves any of the following: a personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency.

*Individual* means a passenger; employee; contractor; other rail transit facility worker; pedestrian; trespasser; or any person on rail transit-controlled property.

*Inform* Those who are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication.

*Integrated Risk Identification System (IRIS)* means a centralized data collection software that collects identified safety risk throughout SacRT. The identified safety risks are then assessed and evaluated based upon the severity and probability.

*Investigation* means the process used to determine the causal and contributing factors of an accident or hazard, so that actions can be identified to prevent recurrence.

*Light Rail Vehicle (LRV)* means a vehicle type with motive capability, driven by electric power taken from overhead lines, and configured for passenger traffic.

*Mainline* means all tracks used for the purpose of the movement of passengers on rail transit vehicles. Mainline does not include storage tracks, yard tracks or other tracks used for the purpose of storage.



## Public Transportation Agency Safety Plan

*Major Projects (Projects)* means new rail systems or extensions, the acquisition and integration of new vehicles and safety critical technologies into existing service or major safety critical redesign projects, excluding functionally and technologically similar replacements.

*Occurrence* means an Event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a transit agency.

*Operation and Maintenance (O&M) Manual* contains the information required for the operation, maintenance, repair, and decommissioning of equipment, building, or a facility.

*Organizational Safety Procedures (OSPs)* means agency-wide procedures which define the agency's safety objectives and the accountabilities and responsibilities regarding managing specific safety risks.

*Outlier* means a data point that differs significantly from other observations. An outlier may be due to variability in the measurement or it may indicate error; the latter are sometimes excluded from the data set.

*Passenger* means a person who is on board, boarding, or alighting from a rail transit vehicle for the purpose of travel.

*Performance Criteria* means categories of measures indicating the level of safe performance within a transit agency.

*Performance target* means a specific level of performance for a given performance measure over a specified timeframe.

*Person* means any individual.

*Personal Electronic Device (PED)* means any wireless or portable electronic device. This includes, but is not limited to, wireless phones, personal digital assistants, smart phones, two-way pagers, portable internet devices, laptop computers, DVD players, audio players, iPods, MP3 players, games, Bluetooth devices, or any headphones or earbuds. The following devices are excluded from this definition:

1. RTA-owned licensed radio communication equipment such as cab mounted or portable two-way radios with channels dedicated solely for RTA operations.
2. Electronic or electrical devices prescribed by a licensed medical practitioner to permit an employee to meet minimum levels of hearing ability as required by the RTA or contractor.
3. Roadway worker protection devices.

*Public Transportation Agency Safety Plan (PTASP)* means the overarching organization-wide document that contains safety management processes. The PTASP utilizes safety management system (SMS) processes to achieve the objectives defined. The PTASP and SMS may be used interchangeably.

*Rail Fixed Guideway System (RFGS)* means any light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, cable car, automatic people mover, or automated guideway transit system used for public transit and not regulated by the FRA or not specifically exempted by statute from Commission oversight.

*Rail Transit Agency (RTA)* means the entity that plans, designs, constructs, and/or operates a RFGS.

*Rail Transit-Controlled Property* means property that is used by the RTA and may be owned, leased, or maintained by the RTA.





## Public Transportation Agency Safety Plan

*Rail Transit Vehicle* means an RTA's rolling stock, including but not limited to passenger and maintenance vehicles.

*Responsible* Those who do the work to complete the task. There is at least one role with a participation type of *responsible*, although others can be delegated to assist in the work required. .

*Risk Assessment Code (RAC)* means assessed risks are expressed as a RAC, which is a combination of one severity category and one probability level. The RAC provides a rating to classify the safety risk that is present.

*Risk-based decision making* provides a process to ensure that optimal decisions, consistent with the goals and perceptions of those involved are reached. This process ensures that all available information is considered and used as appropriate to the decision at hand.

*Risk elimination* means a method or methods to remove the hazard or the effects of hazards.

*Risk mitigation* means a method or methods to reduce the effects of hazards.

*Safety* means freedom from harm resulting from unintentional acts or circumstances.

*Safety Certification* means the series of acts or processes that collectively verify the safety readiness of a Project for public use.

*Safety Certification Plan (SC Plan)* means a Project-specific document developed by a RTA, which ensures that elements critical to safety are planned, designed, constructed, analyzed, tested, inspected, and implemented, and that employees are trained and rules and procedures followed, in compliance with RFGS and regulatory safety requirements.

*Safety Certification Verification Report (SCVR)* means a Project-specific document that will be the final certificate of compliance verifying that the Project complies with all safety requirements identified by an RTA's SC Plan.

*Safety Design Criteria* means the organized listing of safety codes, regulations, rules, design procedures, existing industry standards, recommended practices, analyses, handbooks and manuals prepared to provide guidance to Project designers in development of technical specifications that meet minimum safety parameters.

*Security* means freedom from harm resulting from intentional acts or circumstances.

*Staff* means Commission employees responsible for safety oversight of RTAs.

*Safety Management Procedures* means department level documented task specific processes defining how safety risks will be managed in accordance with the Organizational Safety Procedures (OSP). Safety management procedures are typically appendices to Organizational Safety Procedures.

*Safety Management System (SMS)* means the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards. May be used interchangeably with PTASP.

*Safety Performance Target* means a Performance Target related to safety management activities.

*Safety Promotion* means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.



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*Safety Risk* means the assessed probability and severity of the potential consequence(s) of a hazard, using as reference the worst foreseeable, but credible, outcome.

*Safety Risk Evaluation* means the formal activity to determine Safety Risk Management priorities by establishing the significance or value of its safety risks.

*Safety Risk Management* means process within the Safety Management System for identifying hazards and analyzing, assessing, and mitigating safety risk.

*Serious Injury* means any injury which:

1. Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received;
2. Results in a fracture of any bone, excluding simple fractures of fingers, toes, or nose;
3. Causes severe hemorrhages, nerve, muscle, or tendon damage;
4. Involves any internal organ; or
5. Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface, as estimated using the "Rule of Nines".

*State of Good Repair (SGR)* means the condition in which a capital asset can operate at a full level of performance.

*Subject Matter Expert (SME)* is an individual with a deep understanding of, and wealth of experience in, a particular job, process or technology.

*System Security Plan (Security Plan)* means a document adopted by an RTA detailing its security policies, objectives, responsibilities, and procedures.

*Transit Asset Management (TAM) Plan* means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation.



## Public Transportation Agency Safety Plan

# Safety Policy





## Safety Policy

Safety Management Policy component is divided into four components:

- ) Safety Management Policy Statement
- ) Employee Safety Reporting Program
- ) Safety Policy Communication
- ) Safety Accountabilities and Responsibilities

### 1.1 *Safety Management Policy Statement*

SacRT's accountable executive, management, and staff recognizes that safety is a core value of the organization. SacRT is committed to ensure that all employees are proactive in minimizing risk of injury or incident and will ensure that no disciplinary action will be taken against any employee for reporting an incident or a safety hazard to the agency's management, while acting in accordance with agency procedures and regulations. SacRT will maintain an open and constructive working environment that supports continuous improvement of operational excellence throughout all levels of SacRT.

The purpose of the Public Transportation Agency Safety Plan (PTASP) and Organizational Safety Policies (OSPs) is to manage identifiable risks proactively and effectively. This is done by:

- ) Establishing safety policy, procedures and requirements that integrate safety in SacRT decision making and operations;
- ) Identifying and managing risks related to safety;
- ) Obtaining consistent and optimal human and organizational performance;
- ) Establishing open lines of communication related to safety issues with anyone with whom the organization exchanges services; and
- ) Actively seeking feedback on and improving the organizations safety management activities.

An important part of ensuring that the PTASP is effective is setting out performance goals and measuring the performance of the safety management system relative to those goals. The performance goals of the SacRT PTASP are as follows:

- ) Identify internal trends relative to safety and review these trends to monitor safety related hazards.
- ) Maintain assigned time frames for managing safety related events and their associated corrective actions.
- ) Perform required audits and reviews on a timely basis to ensure the SacRT's continued ability to carry out its activities effectively and safely.
- ) Continuously improve safety within the organization's operations.
- ) Continuously monitor the safety management system for areas of improvement and implement changes as required.

SacRT's Safety Management Policy is communicated to all personnel, management, executives, contractors, and to the Board of Directors.



## Public Transportation Agency Safety Plan

### 1.1.1 Scope and Applicability

The PTASP Plan applies to all of SacRT's transportation system modes including: the two fixed-route bus system modes - motor coaches and Community Bus Services (CBS); the two demand-response modes - SacRT GO and SmarT Ride; and light rail operations and maintenance.

The PTASP Plan defines SacRT's technical and managerial safety activities of our transit system. The PTASP Plan applies to all organizational units affecting, or affected by, the SacRT bus and rail systems from planning through the operations and maintenance phases. Management's compliance with the PTASP Plan ensures that its goals and objectives are achieved.

The PTASP Plan demonstrates SacRT's commitment to safety by identifying programs and processes that minimize all safety events. This PTASP Plan complies with the requirements of 49 Code of Federal Regulations Parts 672, 673 and 674, issued by the Federal Transit Administration (FTA), as well as General Order 164 (Current Series), CPUC RTSB Program Standard, issued by the California Public Utilities Commission (CPUC).

### 1.1.2 Objectives

The following are the objectives of the Public Transportation Agency Safety Plan:

- J Identify, eliminate, and/or control hazards and their associated risks using safety management system processes.
- J Provide a level of safety in transit services that meets, and strives to exceed, industry standards and practices.
- J Improve safety communication throughout the agency.
- J Continuously improve safety of our transportation system by incorporating innovative technologies and improved efficiencies.
- J Achieve Vision Zero by eliminating all transit related traffic deaths.
- J Ensure regulatory compliance.
- J Provide a uniform frame of reference and accountability.

### 1.1.3 Manual Structure

The manual is structured with three interconnected components:

1. Public Transportation Agency Safety Plan (PTASP) defines the following:
  - a. The safety data and processes to collect it;
  - b. The processes used to report safety risks;
  - c. The processes to evaluate safety risks;
  - d. The processes to mitigate or eliminate the safety risks; and
  - e. How safety information is communicated throughout the organization.
2. The Organizational Safety Policies (OSPs):
  - a. The overarching organization-wide collection of documents containing safety policies;



## Public Transportation Agency Safety Plan

- b. The policies are developed and maintained by the Safety Department; and
  - c. Departmental safety procedures are appendices to the OSPs. The departmental safety procedures require review and approval by the Safety Department.
3. Departmental Safety Procedures:
- a. The task-specific procedures define how each department will meet the policies defined in the PTASP and OSP.
  - b. The Departmental Safety Procedures will be used as appendices to the OSPs.

The Security and Emergency Preparedness Program Plan (SEPPP) is a separate program and is handled by SacRT's Police Services Department for issues pertaining to security.

### 1.1.4 Public Transportation Agency Safety Plan

SacRT's PTASP establishes accountability and responsibility at the top levels of the organization, evidenced by the SacRT Board's approval and the General Manager's commitment to allocate necessary resources to sustain and improve SacRT's safety culture. This PTASP explains each organizational unit's function within the larger SacRT transportation system and how accountability for safety is integrated throughout the organization. This PTASP also describes the four SMS components integral to the successful implementation of PTASP within SacRT: Safety Management Policy, Safety Risk Management, Safety Assurance, and Safety Promotion.

This plan is designed to comply with 49 CFR Part 673, Part 674, and CPUC General Orders.

SacRT's Safety Management Policy component is divided into four elements:

- ) Safety Management Policy Statement
- ) Employee Safety Reporting Program
- ) Safety Policy Communication
- ) Safety Accountabilities and Responsibilities

SacRT's Safety Risk Management component includes three sub-elements:

- ) Safety Hazard Identification
- ) Safety Risk Assessment
- ) Safety Risk Mitigation

SacRT's Safety Assurance component includes three sub-elements:

- ) Safety Performance Monitoring and Measurement
- ) Management of Change
- ) Continuous Improvement

SacRT's Safety Promotion component includes the following sub-elements:

- ) Safety Risk Communication
- ) SSOA Communication



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- J Safety Management System Committees
- J Hazard Resolution Fire Life Safety Committee
- J Public Safety Training
- J Drug and Alcohol Program
- J Safety Competency and Training Program
- J Safety Communication

### 1.1.5 Organizational Safety Policies (OSPs)

The OSP is the overarching organization-wide document containing safety policies. The policies are developed and maintained by the Safety Department

Departmental safety procedures are appendices to the OSPs. The departmental safety procedures require review and approval by the Safety Department.

The following procedures are part of the OSP:

Procedure Name	Purpose	Procedure Developer
Event Investigation Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities for accident investigation.</li> <li>J Identification of factors that caused or contributed to the accident and setting forth a Corrective Action Plan (CAP) as appropriate.</li> <li>J Compliant with 49 CFR Parts 673, 674, CPUC GO-164 (current series).</li> </ul>	Safety Department
Aerial Work Platform Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding aerial work platforms.</li> <li>J Describes procedure for safe use and operation of aerial work platform.</li> <li>J Compliant with applicable Title 8 California Code of Regulations requirements.</li> </ul>	Safety Department
Asbestos Awareness Procedure	<ul style="list-style-type: none"> <li>J Establishes requirements on controlling asbestos exposure in order to protect employees and contractors.</li> <li>J Compliant with applicable Title 8</li> </ul>	Safety Department



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Procedure Name	Purpose	Procedure Developer
	California Code of Regulations requirements, and Environmental Protection Agency (EPA).	
Bloodborne Pathogen and Infection Prevention Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities during blood and/or bodily fluid clean up.</li> <li>J Minimize the safety and health hazards and risk to personnel related to bloodborne pathogens and infection.</li> <li>J Compliant with applicable Title 8 California Code of Regulations, and Health and Safety Code requirements.</li> </ul>	Safety Department
Business Continuity and Recovery Plan	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities during emergencies.</li> <li>J Defines the coordination with Federal, State, Regional, and Local Officials regarding emergency preparedness response.</li> <li>J Describes the emergency preparedness evaluation process.</li> <li>J This document meets the requirements of 49 CFR Part 673.11.</li> </ul>	Safety Department
Confined Space Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding confined space entry.</li> <li>J Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Contagious Disease Response Plan	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding contagious disease response.</li> <li>J Describes the contagious disease response process.</li> <li>J Defines the coordination with Federal, State, Regional, and Local Officials regarding contagious</li> </ul>	Safety Department





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Procedure Name	Purpose	Procedure Developer
	disease response.	
Electrical Worker Safety Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding electrical worker safety.</li> <li>J Minimize the safety and health hazards and risk to personnel related to discharge of electrical energy when working within the arc flash boundary distance.</li> <li>J Provide a uniform frame of reference for work on or near energized conductors or equipment.</li> <li>J Compliant with applicable Title 8 California Code of Regulations, and NFPA 70E Standards.</li> </ul>	Safety Department
Fall Protection Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding fall protection requirements.</li> <li>J Compliant with Title 8 California Code of Regulations.</li> </ul>	Safety Department
Fire Prevention Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding fire prevention.</li> <li>J Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Hazard Communication Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding hazard communication.</li> <li>J Describes the process for hazard communication.</li> <li>J Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Hazardous Materials Management Procedure	<ul style="list-style-type: none"> <li>J Defines roles and responsibilities regarding management of hazardous materials.</li> <li>J Describes how to manage hazardous materials.</li> <li>J Compliant with applicable Title 8 California Code of Regulations,</li> </ul>	Safety Department



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Procedure Name	Purpose	Procedure Developer
	Title 40 Environmental Protection Agency, Title 49 Department of Transportation.	
Hearing Conservation Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding hearing conservation.</li> <li>) Describes the process for hearing conservation.</li> <li>) Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Heat Illness Awareness and Prevention Plan	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding heat illness awareness and prevention.</li> <li>) Describes the process for heat illness communication, awareness, prevention.</li> <li>) Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Hot Work Procedure	<ul style="list-style-type: none"> <li>) Minimize the safety and health hazards and risk to personnel related hot work.</li> <li>) Describes the process during work involving hot work.</li> <li>) Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Illness and Injury Prevention Plan (IIPP)	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding illness and injury prevention.</li> <li>) Compliant with applicable Title 8 California Code of Regulations, Labor Code, and Penal Code.</li> </ul>	Safety Department
Job Hazard Analysis Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding workplace hazard evaluation and analysis.</li> <li>) Describes the process for analyzing, and communication of workplace hazard(s).</li> <li>) Compliant with applicable Title 8</li> </ul>	Safety Department



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Procedure Name	Purpose	Procedure Developer
	California Code of Regulations.	
Ladder Safety Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding ladder safety.</li> <li>) Describes procedures regarding safe use of ladders.</li> <li>) Compliant with applicable Title 8 California Code of Regulations.</li> </ul>	Safety Department
Lock-Out/Tag-Out Procedure (LO/TO)	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding LO/TO.</li> <li>) Minimize the safety and health hazards and risk to personnel related to hazardous energy sources.</li> <li>) Provide a uniform frame of reference when performing LO/TO.</li> <li>) Compliant with applicable Title 8 California Code of Regulations, and NFPA 70E Standards.</li> </ul>	Safety Department
Operations and Maintenance Procedure for Paint Shops	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding operations and maintenance of the Paint Shops.</li> <li>) Minimize the safety and health hazards and risk to personnel related to hazardous materials used when painting.</li> <li>) Provide a uniform frame of reference when operating and maintaining the Paint Shops.</li> <li>) Compliant with applicable Title 8 California Code of Regulations, and Sacramento Metropolitan Air Quality Management District (SMAQMD).</li> </ul>	Safety Department
Personal Protective Equipment (PPE) Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding PPE.</li> <li>) Describes procedure to ensure</li> </ul>	Safety Department



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Procedure Name	Purpose	Procedure Developer
	<p>appropriate PPE is available to the workers, when required.</p> <p>) Compliant with applicable Title 8 California Code of Regulations.</p>	
<p>Powered Industrial Truck Procedure</p>	<p>) Defines roles and responsibilities regarding powered industrial truck.</p> <p>) Describes procedure for safe use and operation of powered industrial trucks.</p> <p>) Compliant with applicable Title 8 California Code of Regulations.</p>	<p>Safety Department</p>
<p>Respiratory Protection Plan</p>	<p>) Defines roles and responsibilities regarding respiratory protection.</p> <p>) Describes procedure for respiratory protection.</p> <p>) Compliant with applicable Title 8 California Code of Regulations.</p>	<p>Safety Department</p>
<p>Safety Certification Procedure</p>	<p>) Certification process to ensure safety concerns and hazards are adequately addressed prior to initiation of passenger operations for major projects and modifications.</p>	<p>Safety Department</p>
<p>Scaffold Procedure</p>	<p>) Defines roles and responsibilities regarding scaffold requirements.</p> <p>) Describes procedure for safe use of scaffold.</p> <p>) Compliant with applicable Title 8 California Code of Regulations.</p>	<p>Safety Department</p>
<p>Silica Hazard Awareness and Control Procedure</p>	<p>) Defines roles and responsibilities regarding silica hazard awareness and control.</p> <p>) Minimize the safety and health hazards and risk to personnel related to silica exposure.</p> <p>) Compliant with applicable Title 8</p>	<p>Safety Department</p>



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Procedure Name	Purpose	Procedure Developer
	California Code of Regulations.	
Spill Prevention, Control, and Countermeasures Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding spill prevention, control and countermeasures.</li> <li>) Describes procedure for spill prevention, control, and countermeasure.</li> <li>) Compliant with applicable Title 24 California Code of Regulations, Health and Safety Code, and STI SP001.</li> </ul>	Safety Department
Universal Waste Management Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding management of universal waste.</li> <li>) Describes how to properly manage universal waste.</li> <li>) Compliant with applicable Title 8 California Code of Regulations, Title 40 Environmental Protection Agency, Title 49 Department of Transportation.</li> </ul>	Safety Department
Worker Protection Standard Procedure (EPA)	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding worker protection.</li> <li>) Describes procedures for worker protection.</li> </ul>	Safety Department

The following policies and procedures are incorporated by reference to the OSP. These documents are developed and managed by other departments. This includes:

Procedure Name	Purpose	Procedure Developer
Basic Bus Operator's Training	) Describe basic safe operations of a bus.	Bus Operations
Basic LRV Operator's Training	) Describe basic safe operations of a light rail vehicle.	Light Rail Operations
Bus Maintenance Standard Operating Procedures,	) Describe procedures to ensure safe work procedure for	Bus Maintenance

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Procedure Name	Purpose	Procedure Developer
Bulletins, Rules, and Notices	<ul style="list-style-type: none"> <li>maintaining buses.</li> <li>) Provide a uniform frame of reference performing maintenance on bus.</li> <li>) Provide a uniform communication.</li> <li>) Compliant applicable California Code of Regulations, California Highway Patrol, and Federal Transit Agency.</li> </ul>	
Coach Operator Rule Book	<ul style="list-style-type: none"> <li>) Describe basic safe operations of a bus.</li> <li>) Compliant with applicable California Code of Regulations.</li> </ul>	Bus Operations Community Bus Service (CBS) SacRT GO SmaRT Ride e-Trans
Change Review Committee	<ul style="list-style-type: none"> <li>) Identifies internal and external sources of change;</li> <li>) Documentation of communication and coordination activities</li> <li>) Use of documented field activities to help identify changes in the operational environment that may not have been planned;</li> <li>) Develop criteria to identify and determine the extent of changes in the operational environment that would trigger the initiation of management of change activities;</li> <li>) Documented criteria ensuring information regarding management of change activity is distributed to all relevant service delivery functions.</li> </ul>	Engineering Department
Defensive Driving	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding defensive driving.</li> <li>) Describe procedures to ensure defensive driving when driving a company vehicle.</li> </ul>	Operations Trainers
Drug and Alcohol Program	<ul style="list-style-type: none"> <li>) Policies and Procedures to ensure compliance with 49 CFR Part 655</li> </ul>	Labor Relations



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Procedure Name	Purpose	Procedure Developer
	for safety sensitive personnel.	
Facilities and Equipment Safety Inspection Program	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding facilities maintenance.</li> <li>) Provide a uniform frame of reference when performing facilities maintenance.</li> </ul>	Facilities Maintenance
LRV Operations Standard Operating Procedures, Bulletins, and Notices	<ul style="list-style-type: none"> <li>) Describe procedures to ensure worker, contractor, and public safety on the right-of-way.</li> <li>) Provide a uniform frame of reference when operating a light rail vehicle.</li> <li>) Provide a uniform communication.</li> <li>) Compliant with applicable CPUC General Order requirement.</li> </ul>	Light Rail Operations
Light Rail Vehicle (LRV) Maintenance Standard Operating Procedures, Bulletins, Rules, and Notices	<ul style="list-style-type: none"> <li>) Describe procedures to ensure safe work procedure for maintaining the light rail vehicles.</li> <li>) Provide a uniform frame of reference performing maintenance on a light rail vehicle, camera, and recording devices.</li> <li>) Provide a uniform communication.</li> <li>) Compliant with applicable CPUC General Order requirement.</li> </ul>	LRV Maintenance
Maintenance of Way Standard Operating Procedures, Bulletins, and Notices	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding maintenance of way.</li> <li>) Provide a uniform frame of reference when performing maintenance of way.</li> <li>) Compliant with applicable CPUC General Order requirements.</li> </ul>	Wayside Department
On-Track Safety Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding on-track safety.</li> <li>) Describes procedures to ensure worker, and contractor safety</li> </ul>	Wayside Department



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Procedure Name	Purpose	Procedure Developer
	<p>when work on or near the tracks.</p> <ul style="list-style-type: none"> <li>) Compliant with applicable CPUC General Order.</li> </ul>	
Operation and Maintenance (O&M) Manuals	<ul style="list-style-type: none"> <li>) Contains the information required for the operation, maintenance, repair, and decommissioning of equipment, building, facility, and the development of operational rules and procedures.</li> </ul>	Various Departments
Personal Electronic Device (PED) Procedure	<ul style="list-style-type: none"> <li>) Defines devices which fall under PED.</li> <li>) Describes prohibited use of PED when operating full size bus, CBS bus, light rail vehicle, or any on-track maintenance vehicle while high-railed.</li> <li>) Compliant with applicable CPUC General Order requirement, and California Vehicle Code (CVC).</li> </ul>	Transportation Departments
Procurement Procedure	<ul style="list-style-type: none"> <li>) Measures, controls, and assurances in place to ensure safety principles and requirements, and designated representative are included in the procurement process.</li> </ul>	Procurement Department
Regional Transit Rail Operation Rule book – Light Rail Employees	<ul style="list-style-type: none"> <li>) Describe procedures to ensure worker, contractor, and public safety on the right-of-way.</li> <li>) Provide a uniform frame of reference when operating a light rail vehicle.</li> <li>) Compliant with applicable CPUC General Order requirements.</li> </ul>	Light Rail Operations
Roadway Worker Protection Procedure	<ul style="list-style-type: none"> <li>) Defines roles and responsibilities regarding roadway worker protection.</li> <li>) Describes procedures to ensure worker, and contractor roadway</li> </ul>	Wayside Department



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Procedure Name	Purpose	Procedure Developer
	<p>protection.</p> <p>) Compliant with applicable CPUC General Order.</p>	
SacRT Personnel Policy Manual	<p>) Provide a uniform frame of reference for SacRT personnel.</p> <p>) Compliant with applicable Title 8 California Code of Regulations, and Public Utilities Code.</p>	Human Resources
SacRT Organization Chart	<p>) Illustrate the roles, responsibilities, and chains of command within the organization.</p>	Office of the General Manager
SacRT System Overview	<p>) Organizational structure is clearly defined and includes:</p> <ul style="list-style-type: none"> <li>o History and scope of service;</li> <li>o Physical characteristics of operations.</li> </ul>	Communication Department
SacRT Records Retention Policy	<p>) Defines the retention period for all documents, records, and files related to SacRT administration and operations.</p>	Office of the General Counsel
Security and Emergency Preparedness Program Plan (SEPPP)	<p>) Incident management systems, and external plans for coordinating with local law enforcement, other local responders, local planning agencies, and state or federal agencies.</p> <p>) The basic principles and concepts are applicable to all emergency situations.</p> <p>) Annual exercises are used to evaluate emergency preparedness, and document performance findings.</p>	SacRT Police Services



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### **1.1.6 Record Keeping**

SacRT will maintain PTASP documentation and ensure that all documentation will be maintained for a period of no less than four (4) years after they are created. These documents must be made available upon request by the Federal Transit Administration or other Federal entity, or a State Safety Oversight Agency having jurisdiction in compliance with §673.31. This is in compliance with SacRT Records Retention Policy.

### **1.1.7 Changes to Manual**

The PTASP will be reviewed and reaffirmed or updated annually. This process will be facilitated by the Safety Department. Departments may recommend changes throughout the year when the need for a change is identified. All SacRT employees may submit proposed PTASP changes to their department management. Department Heads will submit proposed changes to the Safety Department.

The Safety Department is responsible for the preparation, maintenance and updating of the PTASP. The Safety Department will maintain SMS documentation and ensure that all SMS documentation will be maintained for a period of no less than four years after they are created. Changes to this PTASP that are urgent in order to meet regulatory compliance can be made by the position fulfilling the Chief Safety Officer role in concurrence with the approval of the General Manager/CEO. The annual review will be completed by the fourth quarter of each calendar year, and will be ready for SacRT Board of Director's approval by January of the following year.

Any change to the PTASP requires:

- J SacRT must notify the CPUC, by letter, before February 15<sup>th</sup> of each year, and certify the PTASP will be modified or updated. This will be done in compliance with CPUC GO 164 (current series).
- J Review and acceptance of the planned changes by the California Public Utilities Commission.
- J Acceptance by the SacRT Board of Directors.
- J Management of change is required for each department impacted to ensure personnel have the knowledge, skills, and supporting procedures to succeed.

## **1.2 Employee Safety Reporting System**

### **1.2.1 Reporting**

All personnel are encouraged and required to report safety risks they encounter during their work activities.

### **1.2.2 Non-Punitive Reporting**

SacRT embodies a culture of open reporting of all safety hazards in which management will not initiate disciplinary action against any personnel who, in good faith, discloses a hazard or safety occurrence due to unintentional conduct.

This applies to all personnel acting in accordance with agency procedures and/or regulations.



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### 1.2.3 Exempted Actions

Personnel willfully acting outside of stated agency policy, procedures, regulations, or in commission of criminal acts will be subject to appropriate disciplinary action.

### 1.2.4 Right to Refuse Dangerous Work and Good Faith Challenge

Personnel that believe working conditions are unsafe or unhealthful should:

- J Inform their Supervisor of the need to correct the hazard, or to assign other work;
- J Advise the Supervisor that you cannot perform the work unless and until the hazard is corrected;
- J Report the event through the reporting portal;
- J Contact the Safety Department; and
- J Remain at the worksite until directed otherwise.

Your right to refuse to do a task is protected if all of the following conditions are met:

- J Where possible, you have asked for the danger to be eliminated, and the condition was not corrected; and
- J You refused to work in "good faith." This means that you must genuinely believe that an imminent danger exists; and
- J A reasonable person would agree that there is a real danger of death or serious injury; and
- J There isn't enough time, due to the urgency of the hazard, to get it corrected through regular reporting procedures.
- J Personnel working in light rail operations, wayside maintenance, and light rail vehicle maintenance have an additional defined Good Faith Challenge procedure, in compliance with CPUC GO 175 (current series).

### 1.2.5 Whistle Blower Protection

SacRT will not discharge or in any manner retaliate against personnel because the individual: filed any complaint or instituted or caused to be instituted any proceeding under or related to the Occupational Safety and Health Act.

## 1.3 Roles and Responsibilities

### 1.3.1 General Manager/CEO-Accountable Executive

The Accountable Executive will:

- J Controls the financial and human resources that are necessary for the activities and operations, including the establishment and implementation of the Public Transportation Agency Safety Plan (PTASP), Transit Asset Management (TAM) Plan, and the Organizational Safety Policies (OSPs).
- J Ensure that SacRT PTASP and OSP are effectively implemented throughout SacRT.
- J Monitor SacRT safety performance and address substandard performance.



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- J Be accountable and responsible for setting the tone for the PTASP and enabling a positive safety culture within the organization.

### **1.3.2 Executive Management Team (EMT)**

The Executive Management Team will:

- J Be accountable for ensuring compliance with all PTASP and OSP requirements applicable to their department(s).
- J Be accountable for the timely completion of corrective action plans (CAPs) assigned to their department(s)
- J Be accountable for the identification of needed change management within their department(s).
- J Be accountable for the establishment of a positive safety culture within their department(s).
- J Be accountable for the dissemination of safety related information to personnel.
- J Analyze any information deemed to be related to safety that is received from any person with whom they exchange services and take appropriate action to mitigate any hazard to safety.
- J Report any safety risks identified.
- J Consist of the General Manager, all Chiefs, General Council, and Vice-Presidents.

### **1.3.3 Senior Management Team (SMT)**

The Senior Management Team will:

- J Be responsible for ensuring compliance with all PTASP and OSP requirements applicable to their department(s).
- J Be responsible for the timely completion of corrective action plans (CAPs) assigned to their department(s).
- J Be responsible for the identification of needed change management within their department(s).
- J Be responsible for the establishment of a positive safety culture within their department(s).
- J Be accountable for the dissemination of safety related information to personnel.
- J Analyze any information deemed to be related to safety that is received from any person with whom they exchange services with and take appropriate action to mitigate any hazard to safety.
- J Report any safety risks identified.
- J Consist of the Assistant Vice-Presidents, Superintendents, Managers, and Supervisors.

### **1.3.4 Vice President of Safety, Security, and Customer Satisfaction**

The Vice President of Safety, Security, and Customer Satisfaction is accountable for:

- J Representing the needs of the Safety, Security, and Customer Satisfaction Departments to the Executive Management Team (EMT).

- J Reports directly to the Accountable Executive.
- J This position will serve as the Chief Safety Officer.
- J Has accountability for day-to-day implementation of the PTASP.
- J Advocating on behalf of the Safety Department to have the appropriate resources.
- J Ensuring the Safety Department shall be involved in all stages including the conceptual design, procurement, construction, integrated testing, safety certification and also throughout the operational life cycle of the system.
- J Presenting the Accountable Executive, Legal, Risk Management, and involved EMT of all Risk Register items classified as being in the “Serious” category when continued operation is under consideration. Continued operation requires review and acceptance by the involved EMT members, Safety, Risk Management, Legal, and the Accountable Executive, with monthly updates.
- J Presenting and updating the Accountable Executive, Legal, Risk Management, and involved EMT of all Risk Register items classified as being in the “Medium” category when continued operation is occurring. These updates are to be provided twice a year.
- J Providing the Safety Department with priorities and concerns identified by the Accountable Executive and the EMT.
- J Administrative oversight and stewardship of the Safety Department.
- J Develop a positive top-down Safety Culture throughout the EMT.

### **1.3.5 Senior Manager of Environmental, Health, and System Safety and the Safety Department Personnel**

The Safety Department is directed and empowered to develop, administer and implement a comprehensive PTASP and OSP with specific goals and objectives, purposes, programs and activities to prevent, control and resolve unsafe conditions/hazards which may occur during the life cycle of the transportation systems. The Safety Department shall be involved in all stages including the conceptual design, procurement, construction, integrated testing, safety certification and also throughout the operational life cycle of the system.

The Safety Department works with all departments and executive leadership to provide information, identify safety concerns, conduct internal reviews and inspections, develop recommendations and corrective action plans to address safety concerns, track and verify the Implementation or recommendations and corrective action plans, and report, on a regular basis, to EMT.

The Safety Department is responsible for the overall effectiveness of the SacRT PTASP and OSP through the following actions:

- J Create, document, and maintain procedures for managing safety related hazards and incidents, including risk analysis and management.
- J Maintain and support a reporting and data collection system for collecting and communicating information relating to safety related hazards and incidents.

- J Assist in the investigation of safety related hazards and incidents and the determination of any related corrective actions.
- J Monitor the implementation of corrective action plans (CAPS) to ensure that they are effective.
- J Ensure that safety related information is disseminated to personnel, including the interdepartmental communication of safety related information with managers.
- J Ensure that all personnel are trained in the concepts, principles and operation of the safety management system.
- J Maintain training records for all safety training.
- J Manage all records and documents resulting from the PTASP and OSP.
- J Promote safety management system principles in all aspects of the operation and positively engage with staff in discussions of safety policy and continuous improvement.

### **1.3.6 Director of Bus Maintenance**

The Director of Bus Maintenance is accountable to ensure the activities of the following departments are compliant with the PTASP and OSP:

- J Bus maintenance
- J Non-revenue vehicle maintenance

### **1.3.7 Director of Light Rail Maintenance**

The Director of Light Rail Maintenance is accountable to ensure the activities of the following departments are compliant with the PTASP and OSP:

- J Light Rail Vehicle Maintenance
- J Track Maintenance
- J Traction Power Maintenance
- J Rail Signal Maintenance

### **1.3.8 Superintendent of Bus Maintenance**

The Superintendent of Bus Maintenance is responsible for ensuring the responsibilities of the department are met and to:

- J Provide top-down leadership and promote a positive safety culture
- J Ensure safety reporting is completed in the IRIS database of:
  - o Maintenance Failure Reports
  - o Identified bus life-safety related inspection deficiencies
  - o Deferred maintenance tracking and reporting
  - o Life safety deficiencies identified during inspection of buses and non-revenue vehicles
- J Timely development, completion, and submission of Corrective Action Plans (CAPs)



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### 1.3.9 Superintendent of Light Rail Vehicle Maintenance

The Superintendent of light Rail Vehicle Maintenance is responsible for ensuring the responsibilities of the department are met and to:

- J Provide top-down leadership and promote a positive safety culture
- J Ensure safety reporting is completed in the IRIS database of:
  - o Maintenance Failure Reports
  - o Identified LRV life safety related inspection deficiencies
  - o Deferred maintenance
  - o Life safety deficiencies identified during inspection of LRVs
- J Timely development, completion, and submission of Corrective Action Plans (CAPs)

### 1.3.10 Bus Maintenance

Bus Maintenance is responsible for providing a safe and mechanically reliable fleet of buses and non-revenue vehicles. The bus maintenance system utilizes preventive maintenance programs which involve performing maintenance on vehicles at regularly scheduled mileage or life cycle driven intervals. The intent is to retain vehicles in a condition compatible with safety, dependability and appearance standards. Well-designed preventive maintenance procedures, and enforcement of these procedures, maintain the effectiveness of these maintenance programs and provide regulatory compliance.

The Preventive Maintenance Program strives to identify problem areas before they require corrective maintenance. Therefore, reporting requirements are developed for each inspection procedure to support future preventive maintenance activities as well as effectively communicate the specific need for corrective maintenance. The flow of information between preventive and corrective maintenance activities is critical to the success of both types of maintenance.

Records of actions are maintained in the Bus Maintenance Shop for the four prior calendar years, and include the following:

- J Inspection - All vehicles are subjected to a periodic inspection program to determine if conditions exist that require a maintenance action. The level and frequency of inspections is consistent with contractor and supplier recommendations, industry standards, criticality of the equipment, probability of finding a defect and operational experience.
- J Servicing - Servicing consists of regularly scheduled activities that are necessary to maintain the performance of the vehicle and its components. These activities include lubrication and adjustment and may also involve the replacement of consumable parts. Servicing schedules are normally provided by equipment manufacturers in their maintenance manuals. Although manufacturer recommendations will be followed during the warranty period of vehicles, servicing schedules may subsequently be modified to suit the operational conditions.
- J Cleaning -All active buses are swept, cleaned, and wiped down daily, floors are scrubbed at least weekly, and exterior washed weekly.

- J Video Recording Retention - Video recordings shall be saved and retained on a separate storage media if a Bus Operator is observed violating SacRT rules. Recordings shall be retained at least until the last appeal of any litigation or disciplinary action is completed.
- J Preventive maintenance requirements will be developed by the manufacturer together with maintenance management, and performance will be monitored to verify adequacy. The requirements will be revised as needed to address a changing environment.
- J Deferred Maintenance will be submitted in the Integrated Risk Identification System for safety risk evaluation, and determine if the deferral is acceptable.
- J Maintenance Failure reports will be submitted in the Integrated Risk Identification System for safety risk evaluation.

### **1.3.11 Light Rail Vehicle Maintenance**

Light Rail Vehicle Maintenance is responsible for providing a safe and mechanically reliable fleet of rail cars and Hi-Rail equipment. The rail vehicle maintenance system utilizes preventive maintenance programs which involve performing maintenance on vehicles at regularly scheduled mileage or life cycle driven intervals. The intent is to retain vehicles in a condition compatible with safety, dependability and appearance standards. Well-designed preventive maintenance procedures, and enforcement of these procedures, maintain the effectiveness of these maintenance programs and provide regulatory compliance.

The Preventive Maintenance Program strives to identify problem areas before they require corrective maintenance. Therefore, reporting requirements are developed for each inspection procedure to support future preventive maintenance activities as well as effectively communicate the specific need for corrective maintenance. The flow of information between preventive and corrective maintenance activities is critical to the success of both types of maintenance.

Records of actions are maintained in the Light Rail Vehicle Maintenance Shop for the four prior calendar years, and include the following:

- J Inspection - All rail vehicles are subjected to a periodic inspection program to determine if conditions exist that require a maintenance action. The level and frequency of inspections is consistent with contractor and supplier recommendations, industry standards, criticality of the equipment, probability of finding a defect and operational experience.
- J Servicing - Servicing consists of regularly scheduled activities that are necessary to maintain the performance of the vehicle and its components. These activities include lubrication and adjustment and may also involve the replacement of consumable parts. Servicing schedules are normally provided by equipment manufacturers in their maintenance manuals. Although manufacturer recommendations will be followed during the warranty period of rail vehicles, servicing schedules may subsequently be modified to suit the conditions of the rail system.
- J Cleaning -All active rail vehicles are swept and cleaned daily, major interior scrubbed monthly, and exterior washed weekly.
- J Video Recording Retention - Video recordings shall be saved and retained on a separate storage media if a rail transit vehicle operator is observed violating CPUC GO 172 (current series). Recordings shall be retained at least until the last appeal of any litigation or disciplinary action is completed.





## Public Transportation Agency Safety Plan

- J Preventive maintenance requirements will be developed by the car builder together with maintenance management, and performance will be monitored to verify adequacy. The requirements will be revised as needed to address a changing environment.
- J Beyond preventive maintenance, SacRT also has a Siemens Rebuild Program, which includes: truck overhaul; replacement of motor alternators with static inverters; and overhaul, upgrade or replacement of various other components on these vehicles.
- J Deferred Maintenance will be submitted in the Integrated Risk Identification System for safety risk evaluation, and determine if the deferral is acceptable.
- J Maintenance Failure reports will be submitted in the Integrated Risk Identification System for safety risk evaluation.

### **1.3.12 Superintendent of Wayside Maintenance**

The Superintendent of Wayside Maintenance is responsible for ensuring the responsibilities of the department are met and to:

- J Provide top-down leadership and promote a positive safety culture
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety related inspection deficiencies
  - o Deferred maintenance
  - o Life safety deficiencies identified during inspection of the system
- J Timely development, completion, and submission of Corrective Action Plans (CAPs)

### **1.3.13 Track Maintenance**

Inspection, maintenance and construction programs are required by CPUC General Orders (GO) 143(current series), Section 14.05. A systematic inspection and maintenance program has been established in accordance with Title 49, Section 213.9 of the Federal Regulations as required by CPUC GO 143(current series), Section 14.05. Records of periodic track inspections showing the defects and deviations from the adopted standards along with the corrective action taken are kept on file for the four previous calendar years.

Frequent track inspection is performed to identify potential safety hazards and to report on the changing conditions of track geometry. Main line track is required to be inspected twice each week with at least one day interval between inspections. Track geometry and fit is inspected for obvious gage and alignment defects, improper ballast section and washouts, tightness and proper fit of switch points and other moving parts. Rail is checked for cracks, deterioration, corrugation, excessive wear. Inspection is conducted of footwalks, handrails, signs and signals for any obvious deficiencies. There are also inspections of the right-of-way for possible clearance infringements, such as vegetation growth.

- J Deferred Maintenance will be submitted in the Integrated Risk Identification System for safety risk evaluation, and determine if the deferral is acceptable.



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- J Track Inspection and repair reports will be submitted in the Integrated Risk Identification System for safety risk evaluation to allow trending.

### 1.3.14 Traction Power Maintenance

The Traction Power Section preventive maintenance plan is a scheduled program that was developed through standard maintenance and operating procedures based on manufacturer recommendations and experience. Inspection forms have been developed for each piece of equipment and document that the preventive maintenance has been performed. These forms are reviewed prior to being filed to determine whether further action is needed. A spreadsheet lists all equipment and associated preventive maintenance intervals. Groups of inspectors are assigned specific areas for which they have responsibility of completing preventive maintenance as scheduled. Records of traction power maintenance and inspection activity, including any defects or deviations from the adopted standards, are kept on file for the four previous calendar years.

The corrective maintenance plan consists of trouble-shooting failures and returning equipment to service. Personnel are dispatched by Metro Control via radio regardless of their assigned preventive maintenance areas. Once on the scene, the inspector will determine what the failure is and take the corrective measures necessary to maintain continuity of revenue service. Temporary repairs are made in order to maintain revenue service and permanent repairs are scheduled for non-revenue hours.

- J Deferred Maintenance will be submitted in the Integrated Risk Identification System for safety risk evaluation, and determine if the deferral is acceptable.
- J Traction Power failure and repair reports will be submitted in the Integrated Risk Identification System for safety risk evaluation to allow trending.

### 1.3.15 Rail Signal Maintenance

The Rail Signal Section preventive maintenance plan is a scheduled program routinely performed at specific intervals. The maintenance intervals are set by equipment O&M manuals, and by tracking equipment performance through routine inspections and failure reports. Manpower deployment is accomplished by means of a check off schedule which lists the routine tasks to be accomplished during the set time frame. This system is designed to prevent duplication of tasks and provide a means whereby many different tasks can be performed in an efficient and timely manner. Reports are filed for each task that is completed and are reviewed to determine if any further action is needed. The objectives of the preventive maintenance plan are to:

- J Ensure operational safety and system dependability by means of periodic testing and inspections;
- J Reduce service failures;
- J Prolong equipment life;
- J Minimize maintenance costs; and
- J Optimize resource allocations.

The corrective maintenance plan consists of troubleshooting failures, the repairing of failed equipment and returning equipment to operations in a safe, efficient and timely manner. Equipment failures which affect the operation of revenue service are handled by immediate response crews which are notified by Metro Control through radio dispatched trouble calls. Failed equipment is



## Public Transportation Agency Safety Plan

replaced in kind and repaired later in order to minimize disruption to revenue service. Trouble reports are filed by the response crews to track equipment failures and to aid in troubleshooting the failed equipment. Equipment is repaired in-house whenever possible or through an exchange program with the manufacturer and returned to stores as spare equipment. The philosophy of the corrective maintenance plan is to repair failed equipment as quickly as possible with minimal effect on revenue service. Grade crossings shall be maintained to comply with the CPUC GO 143(current series), GO 75(current series), and FRA requirements – Title 49 CFR Part 234.

- J Deferred Maintenance will be submitted in the Integrated Risk Identification System for safety risk evaluation, and determine if the deferral is acceptable.
- J Signal failure and repair reports will be submitted in the Integrated Risk Identification System for safety risk evaluation to allow trending.

### **1.3.16 Directors of Bus Operations**

The Directors of Bus Operations are accountable for verifying bus operations meet all safety requirements. Bus Operations is responsible for the training of personnel as required to verify compliance with Rules and Standard Operating Procedures (SOPs).

The Directors of Bus Operations are accountable for the following activities:

- J Confirm that Bus Operators have the required licenses and up-to-date medical certificates.
- J Make urgent changes in rules and procedures by issuing bulletins and notices to Bus Operators; and to ensure that the Daily Bulletins are made available to every Operator.
- J Develop and maintain bus system emergency preparedness and response plans for bus facilities.
- J Conduct/participate in emergency preparedness drills at least once every year.
- J Train new Bus Operators in rules pertaining to safe vehicle operation, emergency procedures and injury and illness prevention; perform re-training following accidents and occupational injuries.
- J Maintain certification and re-certification programs.
- J Ensure that Bus Operators have received the required safety training prior to working.
- J Respond to emergencies and accidents and preserve evidence for later analysis.
- J Investigate bus system operational accidents, incidents, injuries and property losses; make recommendations to mitigate or prevent recurrences. The investigations are conducted through the facilitation of the Safety Department.
- J Ensure Bus Operations staff personnel are trained in:
  - o Injury and illness prevention;
  - o Emergency procedures;
  - o Equipment operation for Bus Operators; and
  - o Conducting post-accident check-rides.
- J Investigate accidents and occupational injuries.



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- J Take corrective actions to prevent or mitigate recurrences including discipline and counseling.
- J Inspect facilities.
- J Take appropriate action(s) to resolve reported or otherwise identified hazards in a timely manner and report hazards as warranted and in accordance the PTASP and OSP. This process is conducted in coordination with the Safety Department.
- J Participate in the analysis of accident data to determine trends and develop corrective action plans. This process is facilitated by the Safety Department.
- J Oversee the functioning of Bus Transportation as line Supervisors, Emergency Response Team Leaders and Bus Operation Trainers.
- J Investigate reports of unsafe conditions and carry out emergency procedures. This process is facilitated by the Safety Department.
- J Provide top-down leadership and promote a positive safety culture.
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system
- J Timely development, completion, and submission of Corrective Action Plans (CAPs).

### **1.3.17 Director of Light Rail Operations**

The Director of Light Rail Operations is accountable for verifying rail operations meet all safety requirements. Light Rail Operations responsible for the training of employees as required to verify compliance with Rules and Standard Operating Procedures (SOPs).

The Director of Light Rail Operations is accountable for the following activities:

- J Confirm that Train Operators have the required licenses and up-to-date medical certificates.
- J Make urgent changes in rules and procedures by issuing bulletins and notices to Train Operators; and to ensure that the Daily Bulletins are made available to every operator.
- J Develop and maintain rail system emergency preparedness and response plans for rail facilities.
- J Conduct/participate in emergency preparedness drills at least once every year.
- J Train new Train Operators in rules pertaining to safe vehicle operation, emergency procedures and injury and illness prevention; perform re-training following accidents and occupational injuries.
- J Maintain certification and re-certification programs.
- J Ensure that Train Operators have received the required safety training prior to working.
- J Respond to emergencies and accidents and preserve evidence for later analysis.

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- J Investigate rail system operational accidents, incidents, injuries and property losses; make recommendations to mitigate or prevent recurrences. The investigations are conducted through the facilitation of the Safety Department.
- J Ensure Light Rail staff personnel are trained in:
  - o Injury and illness prevention;
  - o Emergency procedures;
  - o Equipment operation for LRV Operators; and
  - o Conducting post-accident check-rides.
- J Investigate accidents and occupational injuries.
- J Take corrective actions to prevent or mitigate recurrences including discipline and counseling.
- J Inspect facilities.
- J Take appropriate action(s) to resolve reported or otherwise identified hazards in a timely manner and report hazards as warranted and in accordance the PTASP and OSP. This process is conducted in coordination with the Safety Department.
- J Participate in the analysis of accident data to determine trends and develop corrective action plans. This process is facilitated by the Safety Department.
- J Oversee the functioning of Rail Transportation as line Supervisors, Emergency Response Team Leaders and Rail Operation Trainers.
- J Investigate reports of unsafe conditions and carry out emergency procedures. This process is facilitated by the Safety Department.
- J Provide top-down leadership and promote a positive safety culture.
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system
- J Timely development, completion, and submission of Corrective Action Plans (CAPs).

### **1.3.18 Bus Transportation Superintendent**

The Bus Transportation Superintendent are responsible for the following:

- J Supervision of the Bus Control room staff.
- J Certifying selected Bus Transportation Supervisors as qualified Bus Controllers or Dispatchers.
- J Confirm that Bus Transportation Supervisors have the required licenses and up-to-date medical certificates.



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- J Make urgent changes in rules and procedures by issuing bulletins and notices to Bus Transportation Supervisors.
- J Collect, receive, and verify signatures from Bus Transportation Supervisors for the instructions and training provided.
- J Develop and maintain the bus system emergency preparedness and response plan for rail facilities.
- J Maintain certification and re-certification programs for Bus Transportation Supervisors.
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system
- J Timely development, completion, and submission of Corrective Action Plans (CAPs).

### **1.3.19 Light Rail Transportation Superintendent**

The Light Rail Transportation Superintendent is responsible for the following:

- J Supervision of Metro Control staff and has authority over work permits of personnel working on the system.
- J Certifying selected Rail Transportation Supervisors as qualified Rail Controllers or Dispatchers.
- J Confirm that Rail Transportation Supervisors have the required licenses and up-to-date medical certificates.
- J Make urgent changes in rules and procedures by issuing bulletins and notices to Rail Transportation Supervisors.
- J Collect, receive, and verify signatures from Rail Transportation Supervisors for the instructions and training provided.
- J Develop and maintain the rail system emergency preparedness and response plan for rail facilities.
- J Maintain certification and re-certification programs for Rail Transportation Supervisors.
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system
- J Timely development, completion, and submission of Corrective Action Plans (CAPs).



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### 1.3.20 Bus Transportation Supervisor

Bus Transportation Supervisor is responsible for the following:

- J Responding to accidents and conducting thorough field investigations.
- J Taking charge of accident investigation activities at accident and emergency scenes and assumes the role of the On-Scene Coordinator (OSC).
- J At accident and emergency scenes gathers and preserves evidence and disseminates information to authorized SacRT personnel.
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system

### 1.3.21 Rail Transportation Supervisor

Rail Transportation Supervisor is responsible for the following:

- J Responding to accidents and conducting thorough field investigations.
- J Taking charge of accident investigation activities at accident and emergency scenes and assumes the role of the On-Scene Coordinator (OSC).
- J At accident and emergency scenes gathers and preserves evidence and disseminates information to authorized SacRT personnel.
- J Ensure safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system

### 1.3.22 Bus Controller

Bus Controllers manage bus operations from a central location. Bus Control personnel are responsible for the following:

- J Overseeing and directing all bus movements on all routes.
- J Arranging replacement of defective equipment.
- J Alerting emergency response personnel.
- J Carrying out emergency procedures, including:
  - o Provide notification of SacRT staff through timely notification through InformaCast



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- J Controllers must document and report system failures, equipment malfunctions, incidents, security problems, accidents and unusual occurrences.
- J Controllers direct Bus Operators during emergencies.
- J Overseeing and directing all operator activities on all routes.
- J Ensuring safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system

### 1.3.23 Rail Controller

Rail Controllers manage train operations from a central location. Rail Control personnel are responsible for the following:

- J Overseeing and directing all train movements on the Mainline.
- J Controlling and authorizing power, switch routing, train movement and failure management.
- J Arranging replacement of defective equipment.
- J Alerting emergency response personnel.
- J Carrying out emergency procedures, including:
  - o Provide notification of SacRT staff through timely notification through InformaCast
  - o Provide 2-Hour CPUC Notification
  - o FTA 2-Hour Notication
  - o FRA 2- Hour Notification
  - o FRA 4-Hour Notification
  - o NTSB notification is provided through the National Response Center (NRC).
- J Controllers must document and report system failures, equipment malfunctions, incidents, security problems, accidents and unusual occurrences.
- J Controllers direct Train Operators during emergencies.
- J Overseeing and directing all operator activities on the Mainline.
- J Ensuring safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system





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### **1.3.24 Bus Dispatcher:**

The Bus Dispatcher is responsible for the following:

- J Preparing the schedule for the following day.
- J Assigning operators to open pieces of work.
- J Calculating the extra number of operators required for unknown work that may occur.
- J Calculating pay.
- J Assisting Bus Controllers, when needed.
- J Ensuring safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system

### **1.3.25 Light Rail Dispatcher:**

The Rail Dispatcher is responsible for the following:

- J Marking up the board for the following day.
- J Assigning operators to open pieces of work.
- J Calculating the extra number of operators required for unknown work that may occur.
- J Calculating pay.
- J Issuing work permits and track warrants.
- J Assisting Rail Controllers, when needed.
- J Ensuring safety reporting is completed in the IRIS database of:
  - o Failure Reports
  - o Identified life safety deficiencies
  - o Deferred training
  - o Life safety deficiencies identified during operation of the system

### **1.3.26 Transit Ambassadors**

Transit Ambassadors are responsible for:

- J Provide positive customer service by assisting passengers with questions or concerns
- J Notify the SOC of safety or security related events
- J Identify and report safety risks encountered.
- J Direct passengers during emergency evacuations



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- ) Report any events through the IRIS software.

### **1.3.27 All Personnel**

All Personnel will:

- ) Identify and report safety risks encountered.
- ) Report any events through the IRIS software.
- ) Keep informed of safety communication and updates provided.
- ) Follow the procedures established in the Organizational Safety Procedures (OSP).



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### Safety Risk Management





## 2 Safety Risk Management

Safety Risk Management component includes three sub-elements:

- ) Safety Hazard Identification
- ) Safety Risk Assessment
- ) Safety Risk Mitigation

Safety Risk Management is a cornerstone of the PTASP. During this process SacRT identifies, evaluates, and devises means to eliminate, mitigate, or accept hazards. Not all hazards can be eliminated given the resources available. SacRT's goal with Safety Risk Management is to mitigate hazards to a level as low as reasonably practicable (ALARP).

The SacRT Safety Risk Management (SRM) process involves identifying, reporting, assessing, and mitigating hazards affecting our transportation system.

The SacRT Safety Risk Management process is led throughout our agency by various employees including those involved in the initial design of transit systems, organizational changes, development of operational procedures, and the Safety Assurance process, where newly identified hazards are analyzed and mitigated through the Safety Risk Management process.

When a technical operational or maintenance safety concern or condition is identified, the Safety Department will contact the appropriate Subject Matter Expert (SME) for an initial review. Should the SME's opinion be that the concern or condition is not hazardous, the Safety Department will document that finding in the IRIS database and, if it was reported by an employee, Safety will notify the reporting employee. When the SME agrees the concern or condition to be a hazard, the SME will participate in a formal hazard analysis and identify potential consequences. The hazard assessment will be facilitated by the Safety Department

Once complete, the Safety Department, who, in collaboration with the SME, will perform a safety risk assessment of the hazard's potential consequences. The findings will be entered into the Risk Register.

When the assessment determines that the safety risk is unacceptable, the Safety Department will then notify the responsible department head and coordinate the development of a corrective action plan. When the hazard was reported by an employee, the Safety Department will also notify the reporting employee of the results of the safety investigation.

Once the responsible department head completes a proposed corrective action plan, they will submit it to the SME for review. Once reviewed, the CAP will be provided to Safety who will review and accept the Corrective Action Plan.

Rail related event proposed corrective action plans will be submitted for CPUC review and acceptance of the proposed CAP.

Once the SME, Safety, and the CPUC, when applicable, approves the corrective action plan, the responsible department head will then mitigate or eliminate the hazard and document this in the IRIS database. Some of the methods the responsible department head may use to mitigate the consequences of a hazard include implementing design changes, installing safety devices, installing warning devices, signage, changing work practices, or procedures to provide a level of safety that is practical with the available resources of SacRT.



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Once the mitigation is implemented, the Safety Department will regularly monitor it to determine if the hazard has been adequately mitigated and no longer represents an unacceptable risk, close the hazard report in the IRIS database, and subsequently notify the reporting employee of the actions taken, if applicable. When the hazard is reported anonymously, the Safety Department will post the summary results of the reported hazard investigation on the involved Department's Bulletin Boards throughout the SacRT.

### **2.1 Safety Hazard Identification**

SacRT identifies hazards through analyses of its facilities, vehicles, transit systems, operations, and operational environment. SacRT uses the following methods and processes to identify hazards:

- J Occupational injury or illness investigations
- J Safety Event investigations
- J Safety concern and condition employee reporting
- J Conducting safety focus groups to address current safety concerns
- J Analysis of safety report trending
- J Routine and non-routine inspections
- J Internal and external audits
- J Lessons learned
- J Data and information provided by regulatory agency inspections
- J Data and information provided by the FTA
- J Transit Asset Management (TAM) Plan

#### **2.1.1 Integrated Risk Identification System (IRIS)**

The safety risk reporting tool that will be used at SacRT is called the Integrated Risk Identification System (IRIS). The software permits trending and analysis to be completed for evaluation and assessment. It will aggregate the reporting from the following identified data streams:

##### **2.1.1.1 Personnel Reporting:**

- J Operator event reporting will be converted to electronic reporting by August 2021
- J Personnel Injury Reports will be converted to electronic reporting by August 2021
- J Personnel Safety Risk Reports will be converted to electronic reporting by August 2021
- J Reporting will also permit anonymous reporting

##### **2.1.1.2 Public:**

- J Alert SacRT reporting will be integrated via application programming interface (API) by December 2021
- J Customer Service reports will be integrated via API by December 2021



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### **2.1.1.3 Rail Operations:**

- J Operator event reporting will be converted to electronic reporting by August 2021
- J Collision Investigation Reports will be converted to electronic reporting by October 2021
- J Maintenance Failure Reports will be collected electronically by December 2021
- J Deferred Maintenance Reports will be collected electronically by December 2021
- J Revenue Vehicle Inspection Safety Deficiencies will be collected electronically by April 2022
- J Non-revenue Vehicle Inspection Safety Deficiencies will be collected electronically by April 2022
- J Rail Control Log will be converted to electronic reporting by August 2021
- J Light Rail Station Inspections will be converted to electronic reporting by October 2021

### **2.1.1.4 Bus Operations**

- J Operator event reporting will be converted to electronic reporting by August 2021
- J Collision Investigation Reports will be converted to electronic reporting by October 2021
- J Maintenance Failure Reports will be collected electronically by January 2022
- J Deferred Maintenance Reports will be collected electronically by January 2022
- J Revenue Vehicle Inspection Safety Deficiencies will be collected electronically by April 2022
- J Non-revenue Vehicle Inspection Safety Deficiencies will be collected electronically by April 2022
- J Bus Control Log will be collected via API by August 2022

### **2.1.1.5 Facilities Maintenance**

- J Equipment Failure Report
- J Deferred Maintenance Events
- J Facility Inspection Safety Deficiencies
- J Safety Work Requests

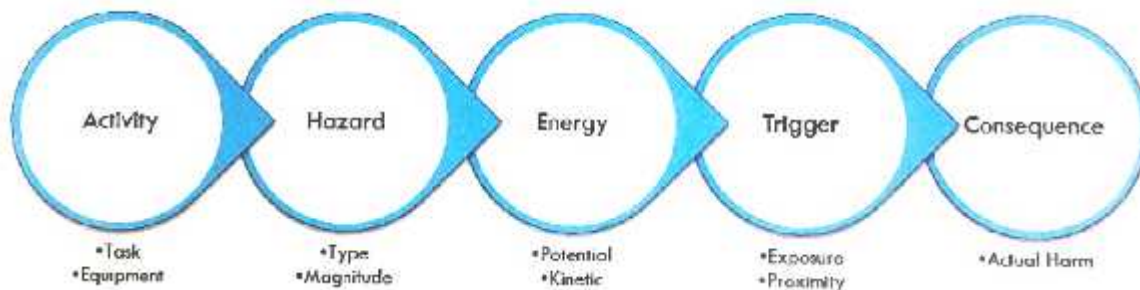
### **2.1.1.6 Transit Asset Management Plan (TAM)**

- J Asset evaluations that rated at less than satisfactory will be provided to the Safety Department by the TAM Plan Manager.
- J Evaluation of the potential to use an API to export from the TAM software into the IRIS software. The functionality is anticipated by December 2021.
- J The Safety Department, in partnership with an SME will conduct a safety risk investigation, assessment, corrective action, and include findings on the Risk Register.

## 2.2 Safety Risk Investigation and Assessment

There are numerous tools and methods that can be used to investigate a safety risk or safety event. There is not one all-encompassing tool or method. Some of the methods used include:

- ) AcciMap
- ) Barrier Analysis
- ) Bowtie Methodology
- ) Causal Factor Analysis
- ) Event Tree Analysis
- ) Failure Mode Effect Analysis (FMEA)
- ) Fault Tree Analysis
- ) Human Factors Analysis
- ) Ishikawa Diagram
- ) Root Cause Analysis
- ) Systematic Cause Analysis Technique (SCAT)
- ) Statistical Process Control (SPC)
- ) Tripod Beta Analysis



The investigation is intended to identify the four interlinked injury pathways and identify where the most effective, and achievable point to eliminate or mitigate the safety risk. Without a thorough analysis, the focus shifts to managing the consequence, not preventing it.

Once the investigation analysis has been completed, all safety risks will be classified by a standardized safety risk assessment.

### 2.2.1 Safety Risk Assessment

SacRT, through the Safety Department and SMEs, will assess the safety risk of the potential consequences of each safety risk identified.

SacRT has established its standards for determining the likelihood and severity of the potential consequences based on the Mil Standard 882E. Once unacceptable safety risks and the potential



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consequences are identified, the Safety Department assesses the risk of the potential consequences. This includes evaluating the likelihood and severity of the potential consequences.

SME's, in coordination with the Safety Department, then determines the necessary mitigation. Responsible managers complete these mitigations to effect hazard resolution. Corrective actions are tracked and managed throughout the entire Safety Risk Management process using a combination of methods including the agency-wide safety management database and Safety-Risk Register. The risk register and corrective action tracking is a component of the IRIS database.

The Safety Risk Assessment process begins with an assessment of the potential severity. The appropriate severity category, as defined in the table below, is determined for a given hazard at a given point in time, identify the potential for:

- ) Death or injury to personnel;
- ) Death or injury to passengers and the public;
- ) Equipment, facility, or infrastructure loss or damage;
- ) environmental damage or impact;
- ) Decrease in operational readiness;
- ) Regulatory noncompliance; or
- ) Damage to reputation or image.

A given hazard may have the potential to affect one or all of these areas.

SEVERITY CATEGORIES		
Description	Severity Category	Mishap Result Criteria
Catastrophic	1	Could result in one or more of the following: death, permanent total disability, irreversible significant environmental impact, or monetary loss equal to or exceeding \$10M.
Critical	2	Could result in one or more of the following: permanent partial disability, injuries or occupational illness that may result in hospitalization of at least three personnel, reversible significant environmental impact, or monetary loss equal to or exceeding \$1M but less than \$10M.
Marginal	3	Could result in one or more of the following: injury or occupational illness resulting in one or more lost work day(s), reversible moderate environmental impact, or monetary loss equal to or exceeding \$100K but less than \$1M.
Negligible	4	Could result in one or more of the following: injury or occupational illness not resulting in a lost work day, minimal environmental impact, or monetary loss less than \$100K.

SacRT will then determine the appropriate probability level as defined in the table below for a given hazard at a given point in time, assess the likelihood of occurrence of a mishap. Probability level F is used to document cases where the hazard is no longer present. No amount of doctrine, training, warning, caution, or Personal Protective Equipment (PPE) can move a safety risk probability to "Eliminated", level F.



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PROBABILITY LEVELS			
Description	Level	Specific Individual Item	Fleet or Inventory
Frequent	A	Likely to occur often in the life of an item.	Continuously experienced.
Probable	B	Will occur several times in the life of an item.	Will occur frequently.
Occasional	C	Likely to occur sometime in the life of an item.	Will occur several times.
Remote	D	Unlikely, but possible to occur in the life of an item.	Unlikely, but can reasonably be expected to occur.
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced in the life of an item.	Unlikely to occur, but possible.
Eliminated	F	Incapable of occurrence. This level is used when potential hazards are identified and later eliminated.	Incapable of occurrence. This level is used when potential hazards are identified and later eliminated.

When available, the use of appropriate and representative quantitative data that defines frequency or rate of occurrence for the hazard, is generally preferable to qualitative analysis. The Improbable level is generally considered to be less than one in a million.

In the absence of such quantitative frequency or rate data, reliance upon the qualitative text descriptions of the table is necessary and appropriate.

Assessed risks are expressed as a Risk Assessment Code (RAC) which is a combination of one severity category and one probability level. For example, a RAC of 1A is the combination of a Catastrophic severity category and a Frequent probability level. The table below assigns a risk level of High, Serious, Medium, or Low for each RAC.

RISK ASSESSMENT MATRIX				
SEVERITY \ PROBABILITY	Catastrophic (1)	Critical (2)	Marginal (3)	Negligible (4)
Frequent (A)	High	High	Serious	Medium
Probable (B)	High	High	Serious	Medium
Occasional (C)	High	Serious	Medium	Low
Remote (D)	Serious	Medium	Medium	Low
Improbable (E)	Medium	Medium	Medium	Low
Eliminated (F)	Eliminated			



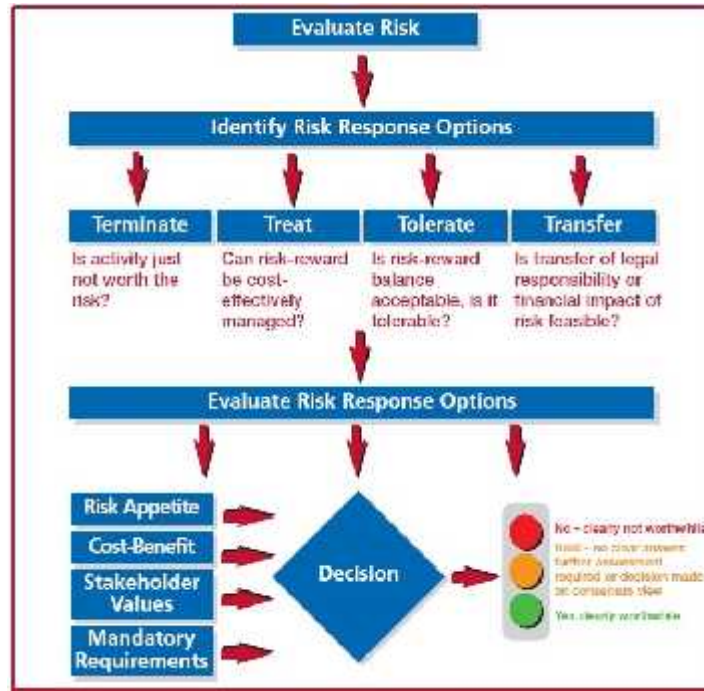
## Public Transportation Agency Safety Plan

Once a Risk Assessment Code (RAC) has been determined the priority for mitigation will be based on the table below:

Risk Assessment Code (RAC)	Required Action
High	<p>Immediate mitigation and controls that reduce the RAC below the “High” classification are required, or activity must be suspended. This risk cannot be accepted.</p> <p>Light Rail related safety risks classified as “High” will be communicated to the SSOA, as soon as is reasonably practicable.</p>
Serious	<p>Prompt mitigation and controls are required to reduce the RAC to “Medium”.</p> <p>Continued operation in a “Serious” category requires review and acceptance by the involved EMT members, Safety, Risk Management, Legal, and the Accountable Executive.</p> <p>Monthly review and assessment are required by the Safety Department and an update to the involved EMT members, Safety, Risk Management, Legal, and the Accountable Executive.</p>
Medium	<p>Mitigation and controls are required to reduce the RAC to ALARP. Continued operation in a “Medium” category requires periodic documented review by Safety, Risk Management, and the involved EMT. Legal and the Accountable Executive are to be updated at least every six months of the unresolved “Medium” RACs.</p>
Low	<p>Mitigation should be considered. Continued operation in a “Low” category requires at least annual review by Safety, Risk Management, and the involved EMT. Legal and the Accountable Executive are to be updated at least annually.</p>
Eliminated	<p>No amount of doctrine, training, warning, caution, or Personal Protective Equipment (PPE) can move RAC to eliminated</p>

## 2.2.2 Risk-Based Decision-Making Process

Risk-based decision making is made up of five major components.



### 2.2.2.1 Establish the decision structure

Understanding and defining the decision that must be made is critical. This first component of risk-based decision making must be performed to accomplish this critical component:

- J Define the decision. Specifically describe what decision(s) must be made. Major categories of decisions include accepting or rejecting a proposed facility or operation, determining who and what to inspect, and determining how to best improve a facility or operation.
- J Determine who needs to be involved in the decision. Identify and solicit involvement from key stakeholders who should be involved in making the decision or will be affected by actions resulting from the decision-making process.
- J Identify the options available to the decision maker. Describe the choices available to the decision maker. This will help focus efforts only on issues likely to influence the choice among credible alternatives.
- J Identify the factors that will influence the decisions, including risk factors. Few decisions are based on only one factor. Most require consideration of many factors, including costs, schedules, risks, etc., at the same time. The stakeholders must identify the relevant decision factors.
- J Gather information about the factors that influence stakeholders. Perform specific analyses such as risk assessments and cost studies to measure against the decision factors.

### **2.2.2.2 Perform the risk assessment**

Different types of risk are important factors in many types of decisions. Risk assessment is the process of understanding the following:

- ) What consequences are possible
- ) What is the likelihood
- ) What is the severity

The consequences may be safety and health losses, property losses, environmental losses, schedule impacts, political issues, etc.

Risk assessment can range from very simple, personal judgments by individuals to very complex assessments by expert teams using a broad set of tools and information, including historical loss data. The following steps must be performed to assess risk:

Establish the risk-related questions that need answers. Decide what questions, if answered, would provide the risk insights needed by the decision maker.

Determine the risk-related information needed to answer the questions. Describe the information necessary to answer each question posed in the previous step. Specify the following:

- ) Information type needed
- ) Precision required
- ) Certainty required
- ) Analysis resources (staff-hours, costs, etc.) available

Select the risk analysis tool(s). Select the risk analysis tool(s) that will most efficiently develop the required risk-related information.

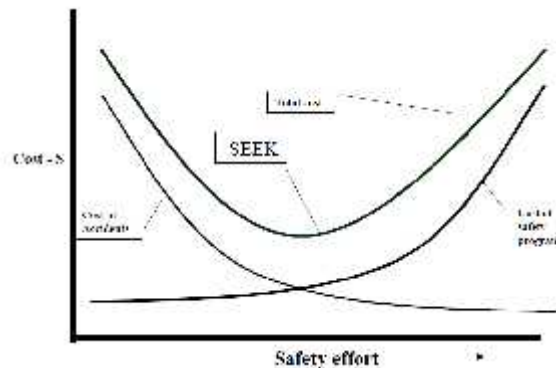
Establish the scope for the analysis tool(s). Set any appropriate physical or analytical boundaries for the analysis.

Generate risk-based information using the analysis tool(s). Apply the selected risk analysis tool(s). This may require the use of more than one analysis tool and may involve some iterative analysis.

### **2.2.2.3 Apply the results to risk management decision making**

One goal in most decision-making processes is to lower risk as much as possible. Sometimes the risk will be acceptable; at other times, the risk must change to become acceptable. Mitigating action must be taken to reduce risk. These actions must provide more benefit than they cost. They must also be acceptable to stakeholders and not cause other significant risks. The following steps must be performed to manage risk:

- ) Assess the possible risk management options. Determine how the risks can be managed most effectively. This decision can include accepting/rejecting the risk or finding specific ways to reduce the risk.
- ) Use risk-based information in decision making. Use the risk-related information within the overall decision framework to make an informed, rational decision. This final decision-making step often involves significant communication with a broad set of stakeholders.



#### 2.2.2.4 Monitor effectiveness through impact assessment

Impact assessment is the process of tracking the effectiveness of actions taken to manage risk. The goal is to verify that the organization is getting the expected results from its risk management decisions. If not, a new decision-making process must be considered.

#### 2.2.2.5 Facilitate risk communication

Risk communication is a two-way process that must take place during risk-based decision making. Stakeholders must:

- )] Provide guidance on key issues to consider. Stakeholders identify the issues of importance to them. They present their views on how each step of the process should be performed, or at least provide comments on plans suggested by others.
- )] Provide relevant information needed for assessments. Some or all of the stakeholders may have key information needed in the decision-making process.
- )] Provide buy-in for the final decisions. Stakeholders should agree on the work to be done in each phase of the risk-based decision-making process. They can then support the ultimate decisions.

#### 2.2.3 IRIS Risk Register

All safety risks once evaluated and assessed will be included in the SacRT Risk Register. All the safety risks are aggregated in a centralized location. The entry in the risk register will include:

- )] Identification of the safety risk
- )] Location of the safety risk
- )] Date of submission
- )] Source of the submission
- )] The risk assessment code (RAC)
- )] Corrective Action Plan (CAP) and Accountable and Responsible persons, when applicable
- )] Projected completion date if a CAP has been developed, when applicable

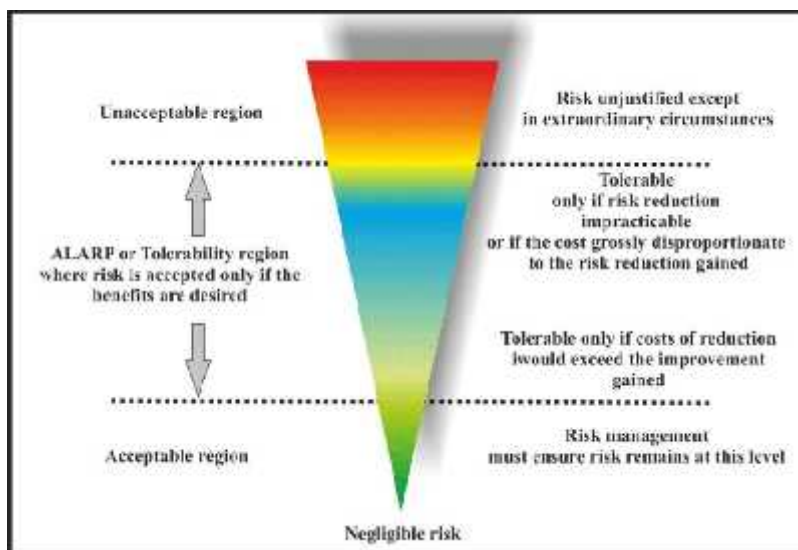
## Public Transportation Agency Safety Plan

- J Current status of the safety risk. Not all safety risks can be immediately corrected. The status will be listed as:
  - o No Action
  - o Investigating
  - o Analyzing
  - o In-Process Behind Schedule
  - o In-Process On-Schedule
  - o Blocked/Waiting
  - o Complete-Monitoring
  - o Complete
  - o Tracking
  - o Deferred
- J Any mitigation taken to reduce the safety risk and the subsequent RAC
- J The risk register can be viewed by any SacRT personnel

### 2.3 Mitigation and Elimination of Safety Risks

SacRT has processes and methods in place to identify mitigations and implement strategies to reduce the agency's safety risks. The five (5) general processes include:

- J Corrective action to mitigate the safety risk to ALARP is taken when the safety risk cannot be eliminated, or not indicated based on a risk-based decision making (RBDM)



- J Corrective action to eliminate the safety risk
- J Corrective action and preventative action to reduce the likelihood or reoccurrence (CAP)

## Public Transportation Agency Safety Plan

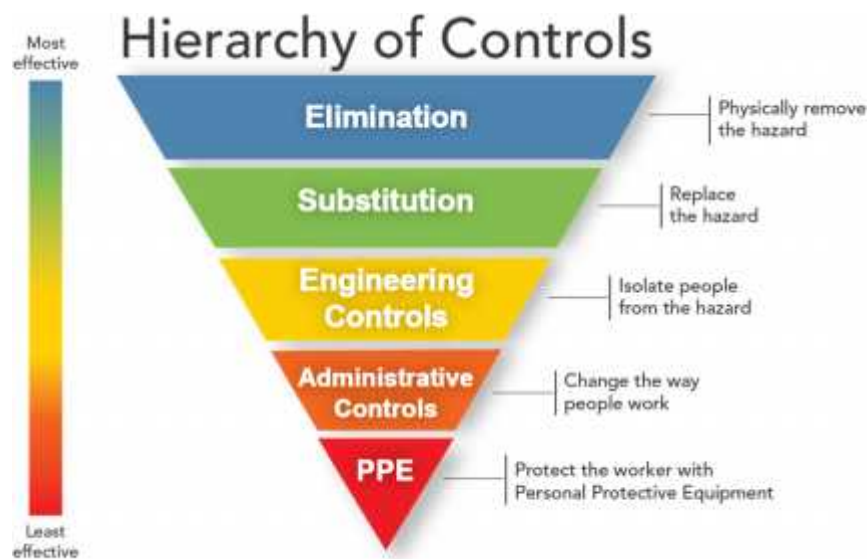
- ) Track to evaluate if the safety risk was an outlier
- ) Defer or accept risk

The corrective action plan (CAP) will include a description, immediate mitigation, origin of hazard, the proposed actions, permanent hazard resolution, or temporary mitigation if necessary, accountable person, responsible person, and the schedule for implementing those actions for the identified hazard, including date the hazard was identified.

Once the responsible department head completes a proposed corrective action plan, they will submit it to the SME for review. Once reviewed, the CAP will be provided to Safety who will review the hazard resolution verification and follow-up activities.

Events with corrective actions, which are under the authority of SSOA oversight, will be submitted for CPUC review and acceptance of the proposed CAP. Development of the CAP must be completed within 30 days. Monthly updates of the CAPs status will be provided to the CPUC. Once the CAP is completed it must be submitted to the SSOA for acceptance.

The appropriate hierarchy of controls is depicted below:



Some of the methods the responsible manager may use to mitigate the consequences of a hazard include:

- ) Elimination
  - o Implementing design changes
  - o Installing safety devices
  - o Modification of equipment or facilities design
- ) Substitution
- ) Engineering Controls
  - o Implementing design changes



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- Installing safety devices
- Modification of equipment or facilities design
- Installation of traffic control devices
- ) Administrative Controls
  - Changes to maintenance schedules or practices
  - Revision of operating rules or procedures
  - Changing work practices or work procedures
  - Employee training
  - Installation of traffic signs or pavement markings
  - Installing warning devices
  - Signage
- ) Personal Protective Equipment

Safety regularly monitors mitigations to determine if the hazard has been reduced to an as low as reasonably practicable, or no longer represents an unacceptable risk. Safety will close the hazard report in the IRIS database and notify the reporting employee of the actions taken. If the hazard was reported anonymously, the department will post the summary results of the investigation and mitigation for the reported hazard on the departments Bulletin Boards.

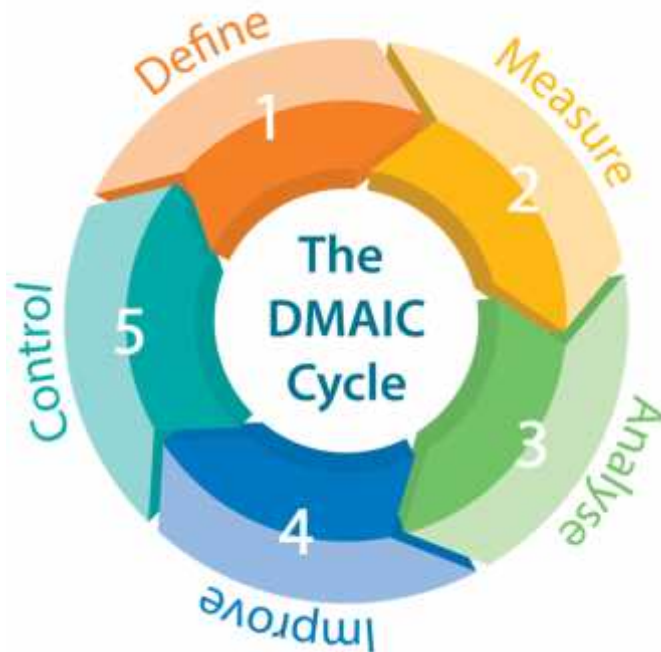
### **2.4 Corrective Action Plan Process**

Development of a corrective action plan provides an organized, and structured framework, to improve policies , process, and or procedures. This formalized process is recommended for all corrective actions, but is required for the following:

- ) Final Investigation Report (FIR) of rail reportable events;
- ) SSOA Inspection;
- ) Triennial audit findings
- ) Internal audit findings

This formalized process is not intended to prevent or delay the implementation of corrective actions for emergency and critical events. The CAP process must be documented as soon as is practicable, after an emergency and critical event.

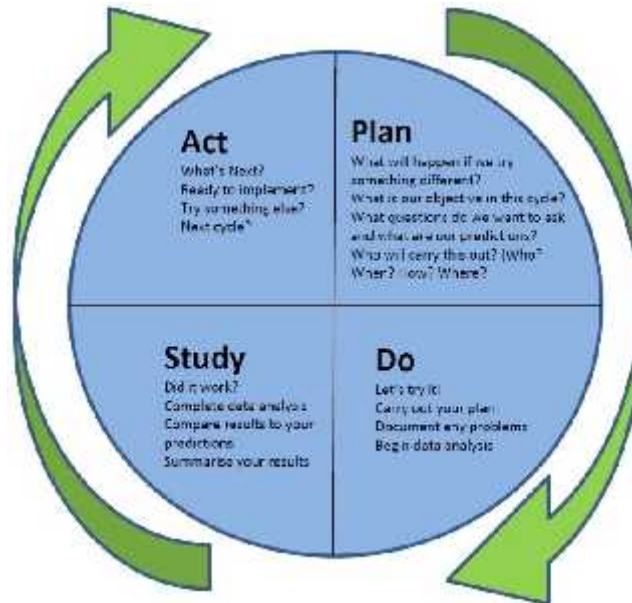




The development of a corrective action is a five-step process. The DMAIC process includes:

1. Define the problem
  - The hazard assessment process. Without a thorough assessment of the safety risk the focus of the corrective action tends to focus on managing consequence, not prevention.
  - CAP Objectives need to be clearly defined and measurable to focus the scope, direction, and motivation.
  - Solicit stakeholder feedback to validate the CAP.
  - Perform a root cause analysis (RCA) to uncover causes.
  - Perform an event chain analysis.
2. Measure current and historical process performance.
  - Parse the data and chart to analyze the frequency of problems or causes.
  - Process map for recording the activities performed as part of a process.
3. Analyze historical data or from sampling data and select from the following tools as applicable:
  - Analyze the process to determine root causes of variation and poor performance.
  - Capability analysis to assess the ability of a process to meet the defined objectives.
  - Multi-variant chart to detect different types of variation within a process.
  - Failure mode and effects analysis (FMEA) for identifying possible product, service, and process failures.
  - Layers of protection analysis.
4. Implement improvement after design.
  - Improve process performance by addressing and eliminating the root causes.
  - Kaizen event to introduce rapid change by focusing on a narrow project and using the ideas and motivation of the people who do the work.
  - Apply change management to determine the need for training and performance evaluation.
  - Consider use of PDSA to test solution and provide for a phased implementation.

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5. Control and monitor the improvement
  - Statistical process control (SPC) for monitoring process behavior.
  - Use quality control to monitor key performance indicators plan to monitor process improvement and identify corrections.
  - Verify change meets the planned objectives.
  - Evaluate and adjust at 30-days, 90-days, and 1-year.



## Public Transportation Agency Safety Plan

### **Safety Assurance**



### 3 Safety Assurance

The Safety Assurance component is divided into six (6) elements:

1. Auditing
2. Investigation
3. Inspection
4. Configuration Control Committee
5. Change Management Process
6. Continuous Quality Improvement

Continuous monitoring of these six (6) elements serves as the basis of the Safety Assurance process.

#### 3.1 Auditing

The Safety Department will submit the Internal Safety Audit Report directly to the Accountable Executive and the Chief Safety Officer for review. This will include an evaluation of the adequacy and effectiveness of the PTASP with findings, conclusions and recommendations.

The Internal Safety Audit Report and the corrective action plan, for rail related items, will be submitted to the CPUC, with a certification letter, signed by the General Manager/CEO. Any problems or disagreements with findings will be reviewed by the Executive Management Team and if the issues still cannot be resolved they will be elevated to the General Manager/CEO for final decision. The final Internal Safety Audit Report with approved recommendations and action plans will then be provided to all departments for implementation.

##### 3.1.1 Annual Audit Report

The final audit report will be issued each year prior to February 15, summarizing the results of the audit(s) performed during the previous year, including a summary of required corrective actions (if any) and previous follow-ups to maintain timely implementation. A copy of the final Internal Safety Audit Report will be submitted to the CPUC, with a formal letter certifying compliance with the PTASP, signed by the accountable executive.

##### 3.1.2 Coordination with Oversight Agency

The internal safety audits will be scheduled and coordinated with the CPUC representative and the CPUC Staff, will be provided a 30 day advance notice, and is invited to participate in the audit process. The CPUC will be provided with the completed reports and status updates regarding implementation of recommendations and corrective action plans.

##### 3.1.3 Audit Completeness

The internal audit will identify the types of documentation that may be required to ensure audit completeness such as: Maintenance Procedures, Training Manuals, Proceedings of Meetings, Equipment Specifications, Rules/Regulations, Management Program Plans, PTASP and OSPs, Operations Standard Operating Procedures, Emergency Procedures, Configuration Management Plan, Hazardous Materials Management Plan, Administrative Procedures, Rule Book, Safety Rules, Fire Codes, and Engineering Design Criteria.

The internal annual safety audits are completed in a coordinated manner, with full management support. Once schedules are approved by SacRT, all involved departments must participate and cooperate.

### 3.2 Investigation

All accidents and incidents, as defined by the NTD reporting criteria will be investigated in accordance with the SacRT Organizational Safety Procedure “*Event Investigation Procedure*”, and in compliance with CPUC GO 164 (current series).

Accidents	Incidents	Occurrences
<p><i>An Event that involves any of the following:</i></p> <ul style="list-style-type: none"> <li>- a loss of life;</li> <li>- a report of a serious injury to a person;</li> <li>- a collision involving a rail transit vehicle;</li> <li>- a runaway train;</li> <li>- an evacuation for life safety reasons; or</li> <li>- any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.</li> </ul>	<p><i>An Event that involves any of the following:</i></p> <ul style="list-style-type: none"> <li>- a personal injury that is not a serious injury;</li> <li>- one or more injuries requiring medical transport; or</li> <li>- damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a rail transit agency.</li> </ul>	<p><i>An Event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a rail transit agency.</i></p>

All investigations will be facilitated and coordinated by the Safety Department, who have received accident investigation training in compliance with §674.35(c).

#### 3.2.1 Investigation Components:

The following components will be evaluated and documented in all investigations:

- J Equipment or Tools
- J Materials
- J Environment
- J Policy and Procedure
- J Personnel
  - o Including evaluation of human factors

#### 3.2.2 Investigation Timeline:

All investigations are to be completed as soon as is practicable, and in compliance with CPUC GO 164 (current series), and the SacRT Accident Investigation Procedure.

The Safety Department will serve as the SacRT single point of contact (SPOC) for communication with the SSOA. Required components of an investigation includes:

- J 2-Hour Notification of reportable events as defined by the CPUC General Order 164 (current series)
- J Notification of investigation
  - o Final Investigation Report must be completed within 60 days



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- Interim status report every 30 days for reports which take more than 60 days
  - Notify SSOA when additional investigation is conducted by an investigation team or panel performing interviews, questioning witnesses, or conducting inspections, measurements, examinations, or tests, etc. as part of the investigation beyond the initial on scene investigation
  - Provide for SSOA's participation to the fullest extent possible in accident investigations, and make all information related to the accident investigation, including data from event recorders, available to SSOA for review.
- J Safety Risks with a risk assessment code (RAC) of "Unacceptable"
- This notification will be as soon as is practicable
- J Within 30-days develop and propose a Corrective Action Plan (CAP) resulting from:
- Final Investigation Report (FIR) of rail reportable events;

A completed investigation report is submitted to the SSOA for review and acceptance. The SSOA may request corrections, changes, or additional information. Additionally, the SSOA may choose to complete its own investigation, when SacRT and the SSOA cannot agree on causal factors and recommended actions. Should this occur, SacRT may request the inclusion of letter of dissent be included with the report, as defined in §674.35(b) GO 164 (current series).

Bus event investigation will comply with the timelines and thresholds established by the SacRT Accident Investigation Procedure.

### 3.3 Inspection

Facility, building, and equipment inspection requirements are defined in O&M Manuals and the SacRT IIPP.

#### 3.3.1 Compliance Monitoring Light Rail Operations

The effectiveness of supervisors in implementing operating rules and maintenance procedures is determined during the performance evaluation process for each supervisor. Also, during the weekly/monthly Staff meetings, the effectiveness of supervisors is monitored and used as compliance verifications.

The compliance checks with train operators are documented with comments and any actions needed. Video recordings shall be saved and retained on a separate storage media, if a train operator is observed violating CPUC General Order. Recordings shall be retained at least until the last appeal of any litigation or disciplinary action is completed. The monthly shop/site inspection for maintenance personnel are documented along with any corrective actions needed. The annual performance evaluations for supervisors are also documented. Based on reports, operators are provided instructions, advice to improve any noted deficiency or weakness.

SacRT has installed inward facing video camera monitoring systems in the operating cab of all LRVs. SacRT will use video camera recordings to conduct random monitoring and enforcement of operating rules and policies governing the use of personal electronic devices.

Light Rail Operations shall conduct, and document, random inspections of 10 percent of all active light rail operators on a quarterly basis, to ensure compliance with operating rules and policies governing the use of personal electronic devices.

The in-cab cameras video shall be reviewed for:



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- J Any derailment.
- J Any impact between a rail transit vehicle and any other vehicle, object, or person.
- J After any activity or event on the right-of-way, involving an LRV, that results in a death, or injury to any person or employee that requires medical treatment.
- J After any credible reported complaint or observation of an alleged violation of GO 172, or a rules violation that may suggest distraction due to PED use.

### 3.3.2 Compliance Monitoring Bus Operations

The effectiveness of supervisors in implementing operating rules and maintenance procedures is determined during the performance evaluation process for each supervisor. Also, during the weekly/monthly Staff meetings, the effectiveness of supervisors is monitored and used as compliance verifications.

The compliance checks of bus operators are documented with comments and any actions needed. Video recordings shall be saved and retained on a separate storage media, when needed. Recordings shall be retained at least until the last appeal of any litigation or disciplinary action is completed. The monthly shop/site inspection for maintenance personnel are documented along with any corrective actions needed. The annual performance evaluations for supervisors are also documented. Based on reports, operators are provided instructions, advice to improve any noted deficiency or weakness.

SacRT has installed inward facing video camera monitoring systems in the operator area of all buses. SacRT will use video camera recordings to conduct random monitoring and enforcement of operating rules and policies governing the use of personal electronic devices.

Bus Operations shall conduct, and document, random inspections of 10 percent of all active light operators on a quarterly basis, to ensure compliance with operating rules and policies governing the use of personal electronic devices.

The in-vehicle cameras video shall be reviewed for:

- J Any impact between a bus and any other vehicle, object, or person.
- J After any activity or event involving a bus that results in a death, or injury to any person or employee that requires medical treatment.
- J After any credible reported complaint or observation of an alleged SacRT rules violation that may suggest distraction due to PED use.

### 3.3.3 Facilities and Equipment Inspections

Facility and equipment inspections are to be conducted by all departments to identify unsafe or unhealthy conditions and to monitor District-wide compliance with SMS requirements.

Results of inspections conducted by division or departments are to be recorded in established standard formats and submitted to the Safety Department.

Periodic inspection programs are used to determine if conditions exist that require a maintenance action. Rail system inspections must be done by their respective departments in accordance with CPUC General Order 143 (current series), Sections 14.04-14.06 and the SacRT Injury and Illness Prevention Program (IIPP). Personnel conducting rail system inspections must be qualified/trained to conduct inspections.



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Each department is required to conduct facility inspections at least monthly, and equipment is inspected on a periodic basis according to preventive maintenance schedules. The frequency of equipment inspections is dependent upon the level of hazard associated with the operation, industry standards and OEM inspection requirements.

Written Checklists are used for conducting facility and equipment inspections.

### 3.4 Change Management Process

A lack of familiarity with new processes and equipment can lead to accidents that could impact the environment, lives, and property. SacRT will review the following types of changes

#### 1. Changes in Operating Procedures

Each piece of equipment comes with procedures on how to operate. Each aspect of work should have systematic end-to-end procedures that personnel can simply follow and execute repeatedly.

Whenever operation guidelines or procedures are changed or updated by the district, there is a risk for personnel to continue with old processes because they are more used to it. Years of following a particular process can lead to muscle memory, and personnel may enter a stage where they have difficulty adapting to new workflows. Accidentally following old procedures is extremely dangerous. Management of Change (MOC) is also required.

#### 2. Changes in Inspection and Test Maintenance Procedures

MOC is needed when SacRT's way of inspecting and maintaining their equipment changes. This ensures that personnel don't get exposed to associated hazards.

Procedures related to preventive maintenance of machines, an inspection of piping, and servicing of equipment should be properly documented. Any changes to these maintenance procedures must go through MOC.

#### 3. Facilities Changes

MOC is also required whenever there are changes to the facilities. When a new structure is built or if it is modified in some way, MOC must be performed. Proximity to machines and equipment can increase the risk of accidents.

#### 4. Temporary Changes

Temporary events require MOC, such as:

- ) Transfer of equipment to a temporary location
- ) Temporary procedure changes due to the installation of new equipment features
- ) Even though these changes will not become a part of your standardized processes, it is still important to be prepared for any negative impact they may have on SacRT, its facilities, and its people.
- ) It is also critical for SacRT to close out any MOC documentation of a temporary change or to update the program if the temporary change becomes permanent.





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### 3.4.1 Capitol Program Committee

The Capital Program Committee (CPC) has members from the Operating, Planning and Engineering, Integrated Services, Safety and Security, and Finance Divisions. The CPC generally meets once a month on a regular basis. Some of the key functions are as follows:

- ) Reviewing and approving capital improvement projects.
- ) Allocating funding for the implementation of the capital improvement projects.
- ) Items proposed for review by the CPC should have a safety risk evaluation identifying the current safety risk associated with the proposal.

### 3.4.2 Safety Certification Program Plan (SCPP)

#### 3.4.2.1 Design Review:

The PTASP addresses SacRT rail system design, acquisition, construction, procurement, installation, testing, safety certification and startup. All new rail system designs must be reviewed in accordance with California Public Utilities Commission (CPUC), applicable Federal Railroad Administration (FRA) requirements, and established industry standards. Light Rail and the Safety Department will participate in the system design review process from at least the 10 percent design review stage. Lessons learned from previous design problems or operational experiences should be incorporated into the design review process to control future hazards, as a part of the Safety Certification Plan (SC Plan) for a project.

#### 3.4.2.2 Safety Certification Acceptance Tests

The Safety Certification Program establishes a process to verify that operating and safety related requirements are incorporated into new rail projects to verify operational readiness prior to entering revenue service. The verification process involves system testing, employee training, start-up activities, and document the findings in a Safety Certification Verification Report (SCVR). The Chief Safety Officer is responsible for overseeing the activities of the Safety Certification Program. The CPUC General Orders requires a safety certification process be established for all major rail projects.

#### 3.4.2.3 Managing Safety System Modifications

The System Modification Review and Control Function involves the control, testing and documentation of identified modifications.

##### 3.4.2.3.1 Control

Changes to systems and subsystems must not be made without first determining how the change might affect the safety of that system or any other system. The proposed modification is evaluated for its potential to create additional hazards or to reduce the effectiveness of existing hazard controls. This process involves determining whether all applicable safety requirements have been met and identifying opportunities for safety improvements.

Non-Configuration Changes: System modifications of a minor nature not involving a configuration change may be made by an individual manager. Other proposed system modifications are submitted to the Safety and Risk Management Departments. Engineering, Safety, Risk Management, and Legal Services are the control points for system evaluations and analysis. They, along with the requesting department will evaluate proposed modifications as related to warranty, reliability, product liability, design immunity, strict liability, third party issues and good engineering/operating practices.



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Configuration Changes: Proposed system changes involving facilities, equipment/software or other physical plant modifications will be submitted to the Change Review Committee (CRC) for evaluation to ensure safety requirements have been met. The CRC is the District-wide central repository located within the Engineering Department.

Individual departments may also submit proposed configuration modifications to the CRC. The CRC assigns a Change Request number and forwards the Change Request to the Change Review Committee (CRC) for review and approval. The CRC then either approves or rejects the proposed configuration modification, and the departments concerned are informed accordingly.

Change Review Committee (CRC): The CRC will review and approve all configuration changes. It is chaired by the Engineering Department and comprised of various operating departments and the Safety Department, as defined in the Configuration Management Plan (CMP). The CRC will evaluate the safety implications of the proposed modification and verify that all organizational units that are, or will be, affected by the proposed modification also have the opportunity to review the proposed modification prior to implementation. The CRC is responsible for informing affected departments and committees of system modifications so that changes to rules and procedures can be made. The CRC then verifies that all training and maintenance programs, rules and procedures, plans, drawings, specifications and other system documentation items have been modified as necessary.

When implemented, the plan will assist the CRC in verifying that the status of all configurations can be easily and accurately identified at any time. It will also formalize procedures for informing departments of modifications being considered and of modifications implemented. All proposed system modifications procedure are maintained by the Engineering Department and addresses the following elements of configuration control:

- J Change Initiation
- J Change Review Committee (CRC)
- J Rail Activation Committee (RAC)
- J Drawing Revision
- J Preparing/Submitting the Change Request
- J The RAC performs cost, schedule and quality checks and forwards change request forms to the CRC for review and evaluation.

In addition to the review and approval process described in this section, rail system design and operational modifications are also submitted to the CPUC for review as required. Modifications involving configuration changes require the approval of the Change Review Committee (CRC).

### 3.4.2.3.2 Testing:

The proposed modification is tested to identify and evaluate its effects on safety and performance. If the testing requires the use of test instruments, then it must be verified that these instruments are calibrated prior to testing. A formal test plan addressing system interfaces is completed prior to testing. Test results are evaluated by the CRC and must be acceptable by all members of the CRC and concerned departments prior to implementation. The CRC is responsible for documenting this testing. Upon completion of its evaluation, the CRC provides recommendations and approval decisions.

### 3.4.2.3.3 Documentation:



## Public Transportation Agency Safety Plan

Configuration changes approved by the CRC are documented. In this process, the CRC and SMEs examine the as-built drawings, equipment drawings, schematics and specifications. It verifies that modifications to all systems are documented accurately and in a complete manner.

The Engineering Department is responsible for maintaining all documentation generated by contract close-out and which is required by Light Rail for SacRT Rail Projects (i.e. rail activation, operations and maintenance). These documents (Project Record [as built] Drawings & Specifications, Operation and Maintenance [O&M] Manuals) will be maintained under configuration- controlled conditions. Other documents (O&M deliverables) such as warranties, permits, and special tools and keys will be transferred to the responsible O&M user department.

Proposed system and equipment/design modifications (including operations software) will be evaluated to verify that all existing safety requirements are met, no new hazards are created and opportunities to improve safety are identified. Rail system equipment/design modifications are submitted to the California Public Utilities Commission for review as required. Approval must be obtained prior to incorporating the modification into the system

### 3.4.3 Change Review Committee (CRC)

The committee evaluates any planned changes to fit, form or function of SacRT equipment, vehicles, or facilities. The review process is designed to identify any safety risks that may be introduced in by the planned changes as a component of the Safety Risk Assessment process. The CRC is responsible for the following:

- J Evaluating proposed hazard resolution and making approval decisions.
- J Performing change reviews for Change Requests and making approval decisions.
- J Providing continuing and timely review of changes proposed and/or ordered to the rail system.
- J Performing cost, schedule and quality checks on Change Requests; conducting Change Technical Reviews if required; and scheduling the Change Request for CRC review.
- J Assigning Change Order numbers to approved Change Requests, maintaining a computer data base log and distributing the approved Change Orders.
- J Processing change control documents.
- J Maintaining: Change Request/Order files and records; minutes, action items and records; general drawing and change status reports; operations and maintenance manuals, specifications and other bulk publications; and permits, vendor information and parts lists.
- J Maintaining the Operations Baseline Drawing Configuration Status Accounting Report and distributing hard copies monthly or as needed.
- J Overseeing and supplying all Operations (field) Technical Libraries.
- J Fulfilling requests for latest drawing configuration, changes pending on drawings and the status of each change in the system.
- J Responding to inquiries and verifying that the user's drawing(s) are of the latest revision and that the user has copies of all outstanding (unincorporated) Change Orders against the drawings.

- J Revising drawings when Change Orders are implemented.
- J Upon completion of the revision, issuing a Notice of Revision to all (Drawing) Controlled Copy recipients.
- J Ordering drawings in hard copy media as required for distribution and updating the drawing configuration status database for release to Technical Libraries and other users as required.

#### **3.4.4 Rail Activation Committee**

The Rail Activation Committee (RAC) is comprised of professionals drawn from SacRT, Consultants and Contractors in order to provide a proactive, multi-disciplinary approach to the certification of Rail Projects.

RAC is co-chaired by the Director of Light Rail Operations and Director of Light Rail Maintenance. The committee oversees the final stages of developing test procedures, Rules and Procedures for conducting test operations, testing installations and witnessing contractor test/review of test results. Finally, with turnover of the Rail Project to the Light Rail Department, SacRT assures continuity and safety in its projects.

Some of the more specific responsibilities include:

- J Resolving problems discussed at RAC meetings.
- J Review and approve operations and maintenance plans.
- J Review and approve Rules and Procedures.
- J Preparing staffing and cost level.
- J Ensuring readiness through emergency drills.
- J Monitoring Construction Installation.
- J Managing work performance of Rail Start-Up (i.e. Training and Operational Readiness).

#### **3.5 Continuous Quality Improvement**

The Quality Management Process includes three (3) distinct methods:

1. Prospective Quality Management is used in the design and implementation phase of a project process or policy, to increase the likelihood of success. Activities include training, education, and procedure development.
2. Concurrent Quality Management is used to provide “real-time” feedback and coaching, during performance of the monitored activity. Examples of this include compliance checks, ride checks, and video observation.
3. Retrospective Quality Management is used to review prior performance, to identify areas for improvement. Those areas are then moved to the prospective quality management process for development.

Combined, these three (3) methods and six (6) Safety Assurance Elements serve as the basis for the continuous quality improvement process. Data informed decision making will be used to identify areas of improvement. This includes review of operating, maintenance rules, and procedures that



## Public Transportation Agency Safety Plan

affect safety will be reviewed for effectiveness, and a determination made regarding the need to be modified.

### 3.5.1 Metrics, Benchmarks, and Goal Setting

Revisions of policies and procedures will include the development of metrics and benchmarks which will be used to evaluate the efficacy of the policy or procedure, and identify the need for change.

Information from compliance checks will be used to develop metrics; establish benchmarks; and develop goals for continuous improvement.

Data used to develop benchmarks will be obtained from the following:

- ) Workers Compensation Loss Runs
- ) US Bureau of Labor Statistics
- ) American Public Transportation Association (APTA)
- ) Federal Transportation Agency-National Transportation Database (NTD)

SacRT's transportation safety performance measures are based on the measures established under the National Public Transportation Safety Plan. These measures will be evaluated over a fiscal year period with a baseline year being Fiscal Year 2021 (7/1/2020-6/30/2021)

#### RAIL METRICS, BENCHMARKS, AND GOALS - LIGHT RAIL

Performance Measures	Targets
Fatalities	0
Fatality Rate Per 100,000 Revenue Miles	0
Reportable Injuries	≥ 10% Reduction of previous year's NTD reported numbers
Reportable Injuries Rate Per 100,000 Revenue Miles	Based on Total Reported Injuries
Reportable Safety Events	≥ 10% Reduction of previous year's NTD reported numbers
Reportable Safety Events Rate Per 100,000 Revenue Miles	Based on Total Reported Safety Events
System Reliability Light Rail (mean distance between major mechanical failures)	≥ 10% Increase in System Reliability based on previous year's NTD reported numbers

#### BUS METRICS, BENCHMARKS, AND GOALS - SACRAMENTO & ELK GROVE

Performance Measures	Targets
Fatalities	0
Fatality Rate Per 100,000 Revenue Miles	0
Reportable Injuries	≥ 10% Reduction of previous year's NTD reported numbers
Reportable Injuries Rate Per 100,000 Revenue Miles	Based on Total Reported Injuries
Reportable Safety Events	≥ 10% Reduction of previous year's NTD reported numbers
Reportable Safety Events Rate Per 100,000	Based on Total Reported Safety Events



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Revenue Miles	
System Reliability Motor Coach (mean distance between major mechanical failures)	≥ 10% Increase in System Reliability based on previous year's NTD reported numbers

**BUS METRICS, BENCHMARKS, AND GOALS –COMMUNITY BUS SERVICES & SMART RIDE**

Performance Measures	Targets
Fatalities	0
Fatality Rate Per 100,000 Revenue Miles	0
Reportable Injuries	≥ 10% Reduction of previous year's NTD reported numbers
Reportable Injuries Rate Per 100,000 Revenue Miles	Based on Total Reported Injuries
Reportable Safety Events	≥ 10% Reduction of previous year's NTD reported numbers
Reportable Safety Events Rate Per 100,000 Revenue Miles	Based on Total Reported Safety Events
System Reliability Motor Coach (mean distance between major mechanical failures)	≥ 10% Increase in System Reliability based on previous year's NTD reported numbers

**BUS METRICS, BENCHMARKS, AND GOALS – SacRT GO\***

Performance Measures	Targets
Fatalities	0
Fatality Rate Per 100,000 Revenue Miles	0
Reportable Injuries	≥ TBD Reduction of previous year's NTD reported numbers
Reportable Injuries Rate Per 100,000 Revenue Miles	Based on Total Reported Injuries
Reportable Safety Events	≥ TBD Reduction of previous year's NTD reported numbers
Reportable Safety Events Rate Per 100,000 Revenue Miles	Based on Total Reported Safety Events
System Reliability Motor Coach (mean distance between major mechanical failures)	≥ TBD Increase in System Reliability based on previous year's NTD reported numbers

\*New service baseline being established

**METRICS, BENCHMARKS, AND GOALS – VIOLENCE AGAINST OPERATORS\***

Performance Measures	Targets
Fatalities	0
Fatality Rate Per 100,000 Revenue Miles	0
Reportable Injuries	≥ TBD Reduction of previous year's NTD reported numbers
Reportable Injuries Rate Per 100,000 Revenue Miles	Based on Total Reported Injuries
Reportable Events	≥ TBD Reduction of previous year's NTD reported



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	numbers
Reportable Events Rate Per 100,000 Revenue Miles	Based on Total Reported Safety Events

\*New metric, needs one (1) year data to establish baseline

### 3.5.2 Coordination with State and Metropolitan Planning Organizations

49 CFR, Part 673, the “Public Transportation Agency Safety Plan Regulation” requires SacRT make their Strategic Performance Targets (SPT) available to their State and Metropolitan Planning Organizations (MPOs) (§ 673.15(a)). That agency would be SACOG for SacRT. SacRT also must coordinate with States and MPOs in the selection of State and MPO safety performance targets, to the maximum extent practicable (§ 673.15(b)).

During this coordination process, to ensure consistency across the transportation modes represented in the state/regional planning process, States and MPOs may request that transit agencies use specific time periods for “total number” SPTs and specific Vehicle Revenue Mile (VRM) values for rate-based Strategic Performance Targets.

When establishing SPTs for total numbers, SacRT considers the total number of fatalities, injuries, and safety events they expect to experience per year (calendar, fiscal, or NTD reporting year). The annual timeframe may be established to ensure consistency with the state/regional planning process. Likewise, in setting rates per VRM, SacRT may use total annual VRM, or another number (e.g. 100,000 VRM, 1,000,000 VRM, or 10,000,000 VRM) as needed for consistency with state/regional planning requirements.

SacRT tracks the following current NTD metrics that will be used as a baseline to determine the Strategic Performance Targets:

- ) Light Rail
  - o Fatalities
  - o Fatalities per total revenue mile
  - o Injuries
  - o Injuries per total revenue mile
  - o Safety Events (Evacuations, fires, etc.)
  - o Safety Events per total revenue mile
  - o System Reliability (Mean distance between failures)
- ) Motor Bus
  - o Fatalities
  - o Fatalities per total revenue mile
  - o Injuries
  - o Injuries per total revenue mile
  - o Safety Events (Evacuations, fires, etc.)
  - o Safety Events per total revenue mile
  - o System Reliability (Mean distance between failures)
- ) Demand Service
  - o Fatalities
  - o Fatalities per total revenue mile
  - o Injuries



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- Injuries per total revenue mile
- Safety Events (Evacuations, fires, etc.)
- Safety Events per total revenue mile
- System Reliability (Mean distance between failures)

The data is currently tracked and reported to the FTA through the National Transit Database (NTD). The responsibility to report the required data is shared between Planning, Finance, and Safety.

### 3.5.3 Safety Data Acquisition and Analysis

This function involves collecting and analyzing safety-related data in order to identify areas that require improvement. Trend analysis is also performed as a means of identifying causes of accidents and occupational injuries. Analysis addresses accident variables, procedures, human factors, environmental conditions, and other factors. A formal link has been established between the Safety Data Acquisition/Analysis function data to support the areas identified for improvement.

The Safety Data Acquisition/Analysis Function also involves acquiring technical information and data for use in the Design Review and the System Modification Review and Control Functions. Sources for such data include, but are not limited to, the following:

- )] American National Standards Institute (ANSI)
- )] American Railway Engineering and Maintenance Association (AREMA)
- )] American Society for Testing and Materials (ASTM)
- )] American Public Transportation Association (APTA)
- )] National Fire Protection Association (NFPA)
- )] California Code of Regulations (CCR)
- )] California Public Utilities Commission (CPUC)
- )] Federal Railroad Administration (FRA)
- )] Federal Transit Administration (FTA)
- )] Safety Data Sheets (SDS)
- )] Society of Automotive Engineers (SAE)
- )] SacRT Accident and Employee Injury Data

Other data sources include building codes, professional society guidelines and others. Safety data is exchanged with other transit systems and is provided to external agencies as required. Safety provides required safety statistics to the California Public Utilities Commission and to the Department of Industrial Relations. The Safety Department reports statistical information to the Federal Transit Administration.

The Safety Department has access to accident data utilizing the IRIS database. Safety can perform various analyses and provide information to other departments utilizing this software. Similarly, Risk Management maintains claims data and provides analyses and reports on request. Exposure trends and recommendations are reported to SacRT management. The following are some of the core safety information reports that are available to all concerned departments:

- )] OSHA recordable injury rate
- )] Lost time cases
- )] Severity rate
- )] Days Away Restricted or Transferred (DART) Rate





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- ) Injuries by department
- ) Injuries by job title
- ) Employee claims by injury type
- ) Injuries by day of week
- ) Accident by description
- ) Accident by category
- ) Accident by location
- ) Accident by day of week
- ) Accident by seniority
- ) Accident by type
- ) Accident by time of day
- ) Accident frequency per 100,000 miles
- ) Accident by route

The Key Performance Indicators for reduction of employee lost time injuries per 100 employees, and bus/rail accidents are established using the latest available Bureau of Labor Statistics (BLS) data for the SIC or NAICS code.



## Public Transportation Agency Safety Plan

### **Safety Promotion**





## Public Transportation Agency Safety Plan

### 4 Communication

SacRT Public Transportation Agency Safety Plan (PTASP), Organizational Safety Policies (OSPs), including all changes in policies or procedures are communicated to all SacRT personnel, managers, and executives, as well as SacRT contractors and to the Board of Directors. The PTASP and OSPs are accessible at:

- ) SacRT Intranet – SacRT personnel may access the PTASP and OSPs electronically at the Safety Division intranet website.
- ) SacRT Internet – SacRT contractors may access the PTASP and OSPs electronically at the SacRT internet website.
- ) Employee Handbook – All existing employees will be provided access to the PTASP and OSPs.
- ) Safety Bulletin Boards – Changes to the PTASP and OSPs are posted on each Safety Bulletin Board located at each SacRT Division, where applicable.
- ) New Employee Orientation – The PTASP and OSPs are presented at the new employee orientation process.

#### 4.1 Safety Risk Communication

SacRT personnel will have access to view the risk register and the status of corrective action plans (CAPs). The access will be through SacRT Intranet.

The following methods or processes are used to convey information on hazards and safety risks relevant to the roles and responsibilities of various personnel:

- ) Pre-shift briefings
- ) Pre-task briefings
- ) Job Hazard Analysis (JHA) review
- ) Departmental Bulletin Boards
- ) Bulletins
- ) Notices
- ) Safety Data Sheets
- ) Chemical Hazard Analysis
- ) Toolbox Talks
- ) Training Programs
- ) InformaCast Announcements

Other methods of risk communication includes the labor management committees or safety committees.

#### 4.2 SSOA Communication

The Safety Department will serve as the SacRT single point of contact (SPOC) for communication with the SSOA. Required notification to the SSOA includes:

- ) 2-Hour Notification of reportable events as defined by the CPUC General Order 164 (current series)
- ) Notification of investigation
  - o Final Investigation Report must be completed within 60 days



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- Interim status report every 30 days for reports which take more than 60 days
- Notify SSOA when additional investigation is conducted by an investigation team or panel performing interviews, questioning witnesses, or conducting inspections, measurements, examinations, or tests, etc. as part of the investigation beyond the initial on scene investigation
- Provide for SSOA's participation to the fullest extent possible in accident investigations, and make all information related to the accident investigation, including data from event recorders, available to SSOA for review.
- )] Safety Risks with a risk assessment code (RAC) of unacceptable
  - This notification will be as soon as is practicable
- )] Monthly Service Records and Event and/or Hazard and Corrective Action Plan (MSREHCAP) Summary
- )] Internal safety and security audit schedule
- )] Internal safety and security audit certification letter
- )] Annual PTASP review and modification notification
- )] Proposed Corrective Action Plan (CAP) resulting from:
  - Final Investigation Report (FIR) of rail reportable events;
  - SSOA Inspection;
  - Triennial audit findings
  - Internal audit findings
- )] Monthly status updates of CAPs under regulatory oversight by the SSOA
- )] Safety Certification Plan
- )] Rail Related SOP changes and notices

### 4.3 Safety Management System Committees

The Safety Management System (SMS) Committee is comprised of professionals drawn from SacRT, Consultants and Contractors in order to provide a proactive, multi-disciplinary approach to support the development, implementation and operation of SacRT's safety promotion.

SacRT will conduct the following meetings, chaired by a member of the Safety Department, at least quarterly to review the safety risk register, corrective action plans, and SMS metrics:

- )] Bus SMS Committee includes members from:
  - Bus Operations Department
  - Bus Maintenance Department
  - Facilities Maintenance Department
  - Engineering Department
  - Risk Management Department
  - Safety Department
  - Police Services
- )] Light Rail SMS Committee includes members from:
  - Light Rail Operations Department
  - Light Rail Vehicle Maintenance Department
  - Wayside Maintenance Department
  - Facilities Maintenance Department
  - Engineering Department



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- Risk Management Department
- Safety Department
- Police Services
- SSOA

### 4.4 Training

Employee safety training programs are developed to comply with federal, state and local regulatory requirements. The Safety Department develops these programs, facilitates implementation by other departments and monitors the programs.

SacRT has implemented the following Employee Safety Training Programs for personnel:

Training	LRV Maintenance	Wayside Maintenance	Facilities Maintenance	Bus Maintenance	Bus Operations	LRV Operations	Other Personnel
Injury and Illness Prevention Program (IIPP)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hazard Communication Program	Yes	Yes	Yes	Yes	Yes	Yes	Awareness Level
SMS Orientation Program	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Asbestos Awareness Program	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First Aid, CPR, & AED training	Yes	Yes	Yes	Yes	No	No	Job dependent
Bloodborne Pathogens/Infection Prevention Program	Yes	Yes	Yes	Yes	Awareness Level	Awareness Level	Awareness Level
Job Hazard Analysis	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level
Hazardous Materials Management	Yes	Yes	Yes	Yes	Awareness Level	Awareness Level	Awareness Level
Universal Waste Management	Yes	Yes	Yes	Yes	Awareness Level	Awareness Level	Awareness Level
Spill Prevention, Control, and Countermeasures	Yes	Yes	Yes	Yes	Awareness Level	Awareness Level	Awareness Level
Lockout - Tagout Program	Yes	Yes	Yes	Yes	No	No	Job dependent
Electrical Worker Safety	Yes	Yes	Yes	Yes	No	No	Job dependent
Qualified	No	Job	No	Job	No	No	No



## Public Transportation Agency Safety Plan

Training	LRV Maintenance	Wayside Maintenance	Facilities Maintenance	Bus Maintenance	Bus Operations	LRV Operations	Other Personnel
Electrical Worker Training		dependent		dependent			
Personal Protective Equipment	Yes	Yes	Yes	Yes	Awareness Level	Awareness Level	Awareness Level
Heat Illness Awareness and Prevention	Yes	Yes	Yes	Yes	No	No	Job dependent
Respiratory Protection Program	Yes	Yes	Yes	Yes	No	No	Job dependent
Hearing Conservation Program	Yes	Yes	Yes	Yes	No	No	Job dependent
Fall Protection Program	Job dependent	Job dependent	Job dependent	Job dependent	No	No	Job dependent
Confined Space Safety Program	No	Job dependent	Job dependent	No	No	No	Job dependent
Aerial Work Platform Operator Training	No	Job dependent	Job dependent	No	No	No	Job dependent
Powered Industrial Truck Operator Training	Job dependent	Job dependent	Job dependent	Job dependent	No	No	No
Business Continuity and Recovery Plan	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Training Level Job dependent
Contagious Disease Response Plan	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Awareness Level	Training Level Job dependent
Drug and Alcohol Policy	Yes	Yes	Yes	Yes	Yes	Yes	Job dependent
On-Track Safety Program	Yes	Yes	Yes	No	No	Yes	Job dependent
Personal Electronic Devices (PED) Procedure	Yes	Yes	Yes	No	Yes	Yes	Job dependent
Roadway Worker Protection Program	Yes	Yes	Yes	No	No	Yes	Job dependent

Personnel who conduct safety audits and examinations of public transportation systems and those who are directly responsible for safety oversight of public transportation agencies are also required to comply with the Public Transportation Safety Certification Training Program requirements. The



## Public Transportation Agency Safety Plan

training program includes the following training provided through the FTA’s Transportation Safety Institute.

Personnel who fill any of the positions listed below have three (3) years from their appointment to the position to complete the available training.

The training for rail personnel who conduct safety audits and examinations includes:

Job	SMS Awareness Training	SMS Safety Assurance	SMS Principles for Transit	Transit Rail System Safety	Effectively Managing Transit Emergencies	Transit Rail Incident Investigation
Director of Light Rail Operations	Yes	Yes	Yes	Yes	Yes	Yes
Director of Light Rail Maintenance	Yes	Yes	Yes	Yes	Yes	Yes
Light Rail Operations Superintendent	Yes	Yes	Yes	Yes	Yes	Yes
Light Rail Vehicle Maintenance Superintendent	Yes	Yes	Yes	Yes	Yes	Yes
Light Rail Wayside Maintenance Superintendent	Yes	Yes	Yes	Yes	Yes	Yes
Police Service Superintendent	Yes	Yes	Yes	Yes	Yes	Yes
Light Rail Transportation Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
Light Rail Vehicle Maintenance Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
Light Rail Wayside Maintenance Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
Police Service Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
CSO & Safety Department Personnel	Yes	Yes	Yes	Yes	Yes	Yes

The training for bus personnel who conduct safety audits and examinations includes:

Job	SMS Awareness Training	SMS Safety Assurance	SMS Principles for Transit	Transit Bus System Safety	Effectively Managing Transit Emergencies	Transit Bus Incident Investigation
Director of Bus Operations (includes CBS and SacRT GO)	Yes	Yes	Yes	Yes	Yes	Yes
Director of Bus	Yes	Yes	Yes	Yes	Yes	Yes



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Maintenance						
Bus Operations Superintendent	Yes	Yes	Yes	Yes	Yes	Yes
Bus Maintenance Superintendent	Yes	Yes	Yes	Yes	Yes	Yes
Bus Transportation Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
Bus Maintenance Supervisor	Yes	Yes	Yes	Yes	Yes	Yes
CSO & Safety Department Personnel	Yes	Yes	Yes	Yes	Yes	Yes

### 4.5 Refresher Training

Personnel who have previously completed training required by the Public Transportation Safety Certification Training Program must complete refresher training every three (3) years. Development of the refresher training requirement will be completed in consultation with the SSOA.

### 4.6 Safety Training Records

Safety training records are maintained electronically, in compliance with the SacRT Record Retention Policy.

### 4.7 Toolbox Talks

SacRT will provide a standardized monthly safety related toolbox topics, distributed to each maintenance department by the Safety Department. Each department will distribute, and present the toolbox talks to their personnel.

### 4.8 Public Safety Training

An On-Track Safety program has been developed for contractors working on or near rail tracks. The purpose of this program is to prevent accidents and casualties caused by moving LRVs or roadway maintenance machines striking roadway workers or roadway maintenance machines.

This program prescribes minimum safety standards for roadway workers. Each contractor may prescribe additional or more stringent operating rules, safety rules, and other special instructions that are consistent with this program.

This program prescribes safety standards related to the movement of roadway maintenance machines where such movements affect the safety of roadway workers. Employees, and Contractors prior to working within ten (10) feet of the rail tracks are required to attend the SacRT's On Track Safety Program.

SacRT maintains electronic records for persons, and organizations that have received On-Track Safety (OTS) training.

Completion of contractor OTS training is verified by the Safety Department as the final component of the Track Warrant Permit process.





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### **4.9 *Drug and Alcohol Program***

The SacRT Drug and Alcohol Program Policy defines the methods of compliance to promote a drug and alcohol-free workforce. The program is in compliance with 49 CFR Part 655.

### **4.10 *Hazard Resolution Fire Life Safety Committee (HRFLSC)***

SacRT will at least annually hold a HRFLSC meeting to review and coordinate with emergency services, utility companies, and public works to offer On-Track Safety training, system/facility changes, familiarization with accessing and safely working around the SacRT system.



## Public Transportation Agency Safety Plan

### *Revision Log*

Revision	Pages Affected	Revision Date	Comments
0	Entire Document		Initial approval

# Public Transportation Agency Safety Plan (PTASP)

Lisa Hinz, VP of Safety, Security and Customer Satisfaction  
October 26, 2020

- PTASP required by FTA and CPUC
  - Explains SacRT's Safety Processes
  - Data-driven approach to manage hazards
  - Includes performance measures and targets
  - Draft plan coordinated with internal stakeholders and provided training
- Based on Safety Management System (SMS) Principles
  - Four Components to SMS:
    1. Safety Management Policy
    2. Safety Risk Management
    3. Safety Assurance
    4. Safety Promotion

## Safety Management System Components

### Safety Management Policy

- Assigns authorities, accountabilities, and responsibilities for all SacRT staff
- Integration with Emergency Management
- SMS Documentation and Records

### Safety Risk Management

- Safety Hazard Identification
- Safety Risk Assessment
- Safety Risk Mitigation

### Safety Assurance

- Safety Performance Monitoring and Measurement
- Management of Change
- Continuous Improvement

### Safety Promotion

- Safety Training Program
- Safety Communication

## SacRT's Safety Performance Measures

### RAIL MEASURES AND TARGETS

Performance Measures	Targets
Fatalities	0
Fatality Rate per 100000 Revenue Miles	0
Reportable Injuries	≥5% Reduction of previous year's NTD reported numbers
Reportable Injuries Rate per 100000 Revenue Miles	Based on Total Reported Injuries
Reportable Safety Events	≥5% Reduction of previous year's NTD reported numbers
Reportable Safety Events Rate per 100000 Revenue Miles	Based on Total Reported Safety Events
System Reliability Rail (mean distance between major mechanical failures)	≥ 5% Increase in System Reliability based on previous year's NTD reported numbers

Deadline for PTASP: December 31, 2020

Steps:

1. Safety staff has reviewed and commented on initial draft
2. Other affected stakeholders comment period on initial draft
3. Submit final draft for comments
4. Submit final draft to CPUC for approval.
5. Presentation to Board for approval (October 26, 2020)
6. Board votes on PTASP (Final version October 26, 2020)
7. Roll out PTASP effective November 1, 2020