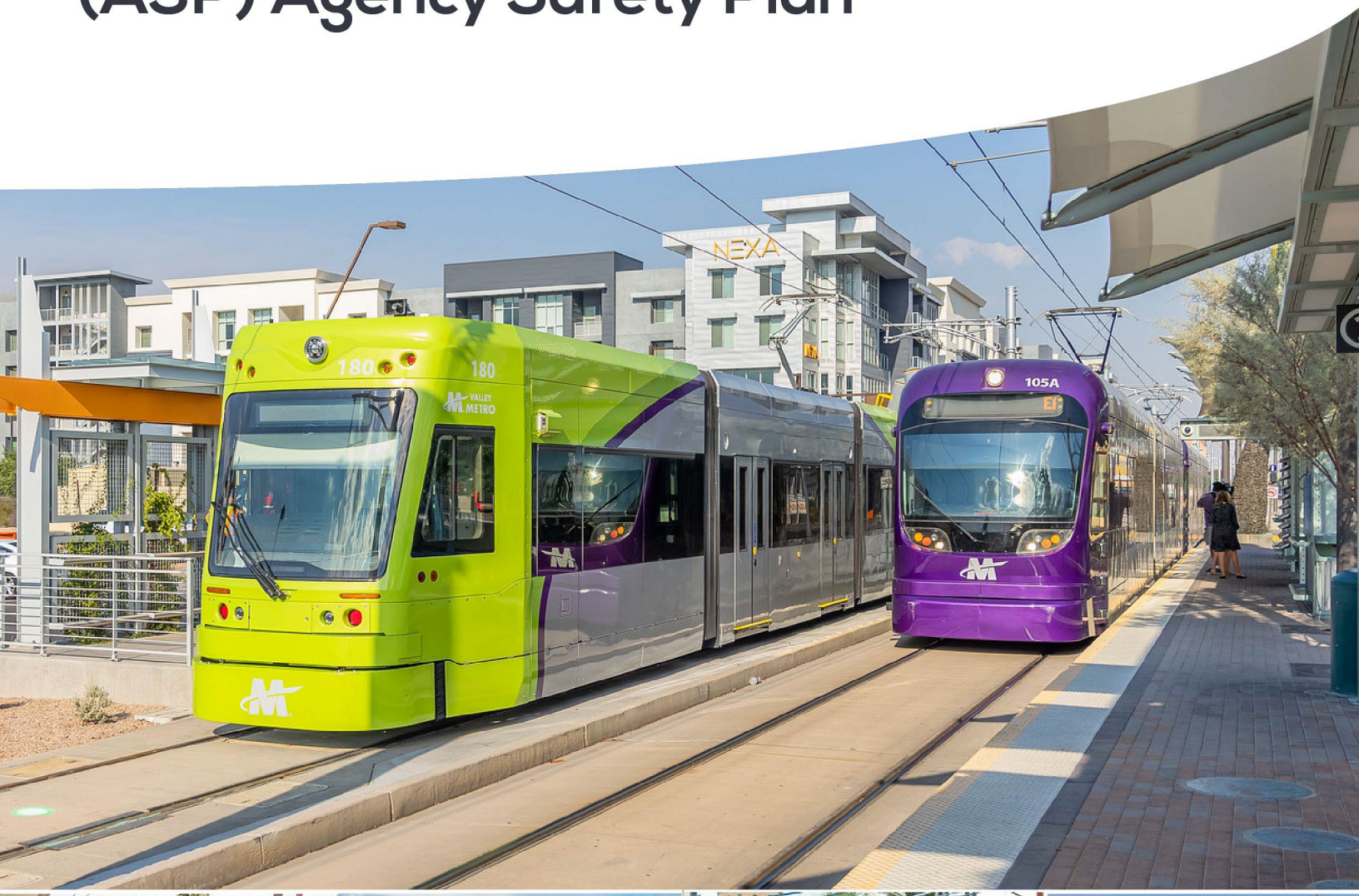
VALLEY METRO RAIL

(ASP) Agency Safety Plan



January 2023
Revision 3

VALLEY METRO

Valley Metro Rail Agency Safety Plan

SUBMITTED BY:

Kenneth Debow (Jan 30, 2023 13:05 MST)

Jan 30, 2023

Kenneth DeBow
Manager, Transit Safety

Date

REVIEWED BY:

Adrian Ruiz (Jan 30, 2023 14:55 MST)

Jan 30, 2023

Adrian Ruiz
Chief Safety Officer
Director, Safety, Security & Quality Assurance

Date

5/18/23

Jessica Mefford-Miller
Accountable Executive
Chief Executive Officer

Date

SAFETY COMMITTEE APPROVAL:

Teddriel Moniorcha (Jun 1, 2023 14:49 PDT)

Jun 1, 2023

Approved by Rail Safety Committee November 28, 2022
Signed by:
Teddriel Moniorcha
Rail Safety Committee Chair

Date

BOARD APPROVAL:

5/18/23

Signed by:
Jennifer Adams
City of Tempe, Vice Mayor
VMR Board Chair

Date

Agency Safety Plan Revision Log

Revision	Approval Date	Summary of Changes
0	October 2020	A.Crowe - Initial Version
1	January 2021	A.Crowe - Updated footer, incorporated agency comments, updated organizational charts, updated implementation plan, updated goals
1	March 2021	R.Kauffman - Update org charts, performance targets, add Safety Assurance to CAPs log sample, Safety Manager
2	January 2022	K. DeBow – Cover page & document title, footer, agency Information (LRT & TSC), performance targets, job titles/roles and responsibilities (addition of Deputy Directors), organization charts, elimination of light rail specific language (where applicable), modification to section 6.3, Appendixes D, E, F
3	October 2022	K. DeBow - Performance Targets Added Appendix H – Training Plan PTASP Bipartisan Infrastructure Law Required Updates Updated Organization Charts

CONTENTS

1.0 TRANSIT AGENCY INFORMATION

Transit Agency Name: Valley Metro RPTA

Transit Agency Address: 101 North 1st Avenue, Phoenix, Arizona

Name & Title of Accountable Executive: Jessica Mefford-Miller, Chief Executive Officer

Name of Chief Safety Officer: Ms. Adrian Ruiz, Director of Safety, Security and Quality Assurance

State Safety Oversight Agency: Mr. Brian Brinkley, Arizona Department of Transportation (ADOT)

Mode(s) of Service covered by this plan: Light Rail and Streetcar

Valley Metro operates the only light rail system within the Phoenix Metropolitan area, with an average weekday ridership of 48,000 boarding's. VMR operates a fleet of 54 certified light rail vehicles traveling over 10,000 miles each weekday, on a 28-mile alignment, serving 38 stations within the cities of Phoenix, Tempe, and Mesa. VMR's service area encompasses 39.1 square miles within the Phoenix Metropolitan area. Monday through Saturday trains operate at 15-minute intervals during peak hours and 20-minute intervals during off-peak hours. Trains run every 20 minutes on Sundays and holidays. Additional information about Valley Metro's light rail system can be found at: https://www.valleymetro.org/fact-sheets

This document also applies to the 3-mile Tempe Streetcar (TSC), and the 6 modern streetcar vehicles. The TSC connects the commercial Rio Salado Parkway district with downtown Tempe and Arizona State University's main campus along Apache Boulevard in Tempe, AZ. Streetcar vehicles are smaller than light rail vehicles, totaling 72 feet in length and operate in revenue service individually (not coupled). The streetcars east terminal is located at Dorsey/Apache Boulevard adjacent to the Dorsey/Apache light rail station. The west terminal is located on Rio Salado adjacent to the Marina Heights commercial development. Part of the TSC system requires the use of overhead catenary power, while others are wireless. The streetcar vehicles are equipped with onboard energy storage systems to power the vehicle through wireless sections. The TSC entered revenue service in May of 2022.

2.0 PLAN DEVELOPMENT, APPROVAL, AND UPDATES

The purpose of this document is to outline how Valley Metro is meeting the requirements outlined in the Federal Transit Administration's (FTA) National Safety Plan. The National Safety Plan serves as the FTA's key communication tool for a safety approach that sets forth a proactive approach to safety risk management that is outcome-focused and emphasizes safety performance. More information about the National Safety Plan can be found on the FTA's website.

This document outlines how Valley Metro has adopted the SMS framework in compliance with the Moving Ahead for Progress in the 21st Century Act (MAP-21). The Chief Safety Officer (CSO) and their team works alongside operations, including collaboration on the agency's Transit Asset Management (TAM) plan and state of good repair. These collaborative efforts are designed to coordinate organizational efforts from the top-down, to ensure all employees, contractors, and riding public have a safe system.

Page ii contains dated signatures for the Accountable Executive, the Safety Committee Chair, and the Board of Directors. This page also includes the signature of the CSO certifying compliance with Part 673, Part 674, and Arizona Department of Transportation's Rail Transit Safety and Security Oversight Program Standard.

The review of this document is the responsibility of the Director, Safety, Security and Quality Assurance (SSQA). Each page of this document contains a footer with the document name, page number, revision number, and revision date. The initial version of the document is Revision 0. As changes are made to the document, the revision number is increased by one and the revision date is updated. A summary of changes made during each revision is contained in a table on page 3.

This document is reviewed on an annual basis to determine if revisions need to be made. Updates may be needed for a variety of reasons, including but not limited to changes in internal or contractor processes, changes in organizational structure, or changes in regulatory requirements. The narrative and table below outline the process.

During the fourth quarter of each calendar year, the Director, SSQA distributes draft copies of this document and a comment resolution form to the Leadership and Management Teams for review. Leadership Team members are:

- Chief Operations Officer
- Director, Communications & Strategic Initiatives
- Director, Capital Development
- Chief Administrative Officer
- Chief Financial Officer
- General Counsel
- Chief Executive Officer
- Senior Advisor/Chief of Staff

Deputy Directors and Management Team members include representatives from each division, all of whom report to the Leadership Team members listed above.

The comment resolution forms are due back to the Director, SSQA by December 30th. Per the ADOT Program Standard, if Valley Metro determines a document does not need to be updated, the Director, SSQA must prepare and submit formal correspondence to ADOT State Safety Oversight (SSO) stating no revisions are needed by January 1st. If revisions are needed, the Director, SSQA compiles feedback from the document reviewers and submits the reviewed/revised documents, along with a summary of changes, to ADOT SSO by January 30th. Per ADOT SSO's procedure, Valley Metro will receive a response within thirty calendar days after ADOT SSO receives the documents. If the documents are not approved, Valley Metro will have an additional thirty days to respond to ADOT SSO's feedback. Valley Metro and ADOT SSO will continue to work towards resolution, allowing no more than thirty calendar days for either agency to provide a response until the issue is resolved. When revisions are approved, the revision number and date will be added to the footer and the Director, SSQA will route the final document for Valley Metro's signatures.

After the final document has been signed, it is uploaded into Valley Metro's online document database and the Director, SSQA formally transmits the document to division directors for dissemination among their teams. Additionally, an email will be sent to all employees and contractors about the updated document and how/where it can be viewed.

Task	Responsibility	Target Date
Send out draft copy to division leads for review and redlines	CSO	Quarter 4 (CY)
Receive feedback from reviewers	Leaders/Managers	December 30
Determine if ASP requires revision based on internal review comments	CSO	December 30
Notify SSO if an update is or is not needed	CSO	January 1
If necessary, provide an updated document to SSO for review	CSO	January 31
Approve revised document or request additional information	ADOT SSO	March 1
Submit additional information, if needed, and submit revised document to SSO	CSO	April 1
Upon document approval by SSO, transmit copies of document to division leads and post on Valley Metro's intranet (if applicable)	CSO	Upon SSO approval

3.0 EMERGENCY PREPAREDNESS AND RESPONSE PLAN

This section provides a brief overview of Valley's Metro's integration with Public Safety and emergency management/preparedness activities. Valley Metro's Security Emergency Preparedness Plan (SEPP) provides additional information about the processes for responding to emergency conditions impacting the rail system, including assistance to emergencies that occur in the region that do not directly affect the rail system. The processes used for the revision and distribution of the SEPP are outlined in section 6.3.1. In addition, Valley Metro has policies and procedures that outline specific emergency procedures related to the operation of the rail systems.

3.1 RESPONSIBILITIES FOR EMERGENCY PREPAREDNESS

Emergency management planning is the responsibility of Valley Metro's SSQA division. To coordinate emergency preparedness directives in the region, the Director, SSQA or designee will represent Valley Metro as an attendee in the Urban Area Security Initiative (UASI), through the Division of Emergency Management.

Valley Metro is directly responsible for training its employees on emergency response and preparedness. This also applies to all Valley Metro sub-contractors, except for Valley Metro's Transportation Services Contractor. The Transportation Services Contractor is responsible for training its employees on their role specifically related to train operations during system emergencies. The Transportation Services Contractor also participates in Valley Metro's emergency training drills and support training for emergency services personnel.

Additionally, the Fire/Life Safety and Security Committee (FLSSC) may assist in the development of emergency response plans and participate in training and emergency drills for extensions and major capital projects. The FLSSC evaluates the need for revisions to existing emergency services training and makes recommendations to Valley Metro.

The Regional Security Team (RST) encompasses the regular (non-project) safety/security group meetings. If representation from a Fire Department is needed, they are invited to attend the RST meeting.

3.2 EMERGENCY DRILLS

One emergency drill is conducted annually, as required by the Valley Metro SEPP, in conjunction with local public safety agencies. The schedule for emergency drills is determined by the Director, SSQA and Valley Metro's Operations team, with input and coordination with local public safety agencies.

Each emergency drill is monitored and formally evaluated by both Valley Metro and public safety agencies, typically using a checklist prepared for the specific activity. Reports on emergency drills that contain after action reports and implementation plans are typically prepared and made available to ADOT SSO.

Specific Valley Metro divisions are expected to attend scheduled drills, if requested by the Director, SSQA. All divisions that participate in a drill event are required to meet immediately after the drill to debrief with their specific employees and the Director, SSQA upon completion of the drill. Records are to be kept by each division manager for review, as needed.

3.3 EMERGENCY PROCEDURES

Emergency procedures for the rail system are contained in the Standard Operating Procedures and the Valley Metro SEPP. The Standard Operating Procedures and the Transportation Rulebook are evaluated by a committee established for that purpose. In addition, Valley Metro has developed a First Responder Safety Training presentation and distributed it to fire and police divisions in Phoenix, Tempe, and Mesa.

3.4 EMERGENCY TRAINING FOR FIRST RESPONDERS

Training for emergency responders is developed and continually updated by those respective agencies with the assistance as needed by Valley Metro. Training is provided via classroom and field training instruction. Emergency service agencies are responsible for training their own personnel. Valley Metro is available to help as needed and provide access to Valley Metro property, systems, and equipment.

Training of external emergency services personnel may be conducted using several methods, including general introduction to Valley Metro systems and facilities, tabletop exercises, small scale drills, and full-scale simulations. ADOT SSO is invited to participate in emergency services personnel training. In addition, familiarization training covering facilities and vehicles is made available to public safety agencies.

Operations familiarization training is also provided to first responders. Fire and rescue units responsible for the Operations and Maintenance Center (OMC) and storage yard are invited and encouraged to tour the facility on an annual basis and are briefed on campus procedures and plans at that time. OMC plans are provided for inclusion into their computer aided dispatch system. In addition, light rail vehicles and Valley Metro staff are available for familiarization training for the Phoenix, Tempe and Mesa Fire Divisions on other areas that are outside of the OMC campus.

4.0 SAFETY PERFORMANCE TARGETS

4.1 INTRODUCTION

Valley Metro analyzed the size, complexity, and operating environment of its light rail and streetcar systems and elected to track and monitor the performance for both NTD modal categories simultaneously as a single ASP modal category identified as *Rail*. Valley Metro has established Safety Performance Targets for the Rail mode to address the Safety Performance measures identified in the FTA's National Public Transportation Safety Plan.

The FTA has selected four safety performance measures that must be included in the Agency Safety Plan (ASP):

- Fatalities – total number of reportable fatalities and rate per total rail vehicle revenue miles
- Injuries – total number of reportable injuries and rate per total rail vehicle revenue miles
- Safety events – total number of reportable events and rate per total rail vehicle revenue miles
- System reliability – mean distance between major mechanical failures by mode

The thresholds for "reportable" fatalities, injuries, and safety events are defined in the National Transportation Database (NTD) Safety and Security Reporting manual. Major mechanical system failure is defined as an event that prevents a vehicle from completing or starting a scheduled revenue trip because actual movement is limited or because of safety concerns.

Valley Metro monitors reliability by tracking component-level failures based on the system they are part of. Failures are measured based on both mileage and hours. Fifteen categories are tracked:

- Passenger Doors
- Propulsion System
- Communication, Video Monitoring, Public Address, and Passenger Information Systems
- Braking System
- HVAC
- APSE System
- Truck and Suspension Systems
- Event Recorder System
- Bumper and Coupler System
- Lighting System
- Cab Equipment System
- Propulsion Inverter Controller / Circuit Card System
- Door Control Unit
- Friction Brake ECU system
- Monitoring and Diagnostic Systems

Additionally, Valley Metro will be measuring:

- Employee Injury Rates – injury rate per hours worked, inclusive of all Valley Metro employees.
- Red signal overruns – total number of unauthorized red signal overruns (verified from interlocking downloads) and rate per total LRV revenue miles.

Light Rail and Streetcar data is collected monthly and documented on tracking logs by NTD modal category. Data for both NTD modes is compiled and summarized on a calendar year basis. Performance measures and associated targets will be reviewed quarterly at Safety and Security Committee meetings and Executive/Management Team meetings. Performance updates will be provided to the CEO and the Board on a regular basis. If adequate progress is not being made towards achieving a performance target, the SSQA division will coordinate a break-out session to review the specific performance measure, obstacles preventing the target from being met, and possible solutions/mitigations to move towards meeting the target.

As required by 49 CFR Part 673.15 Valley Metro meets with the Maricopa Association of Governments (the Metropolitan Planning Organization MPO) at least annually to discuss and coordinate Valley Metro's safety performance targets described in section 4.2 of the Agency Safety Plan. Additionally, Valley Metro provides input to the MPO regarding regional/state safety performance targets.

4.2 RAIL SAFETY PERFORMANCE TARGETS

Performance targets for CY2023 are listed below. As described in section 4.1, metric data will be collected, reviewed, and reported to applicable parties on a regular basis. The information will be presented in a variety of excel workbooks, charts, and graphs.

Rail Safety Performance Targets	
Fatalities	Total number of fatalities reported to the NTD (deaths confirmed within 30 days), excluding trespassing and suicide-related fatalities.
Injuries	Total number of injuries reported to the NTD (events on the S&S-40 [major] form for a Full Reporter), excluding injuries resulting from assaults and other crimes (security events).
Safety Events	Total number of safety events (not security events) meeting a major event reporting threshold reported to the NTD by a Full Reporter on the S&S-40 form.
System Reliability	Mean distance between major mechanical failures by mode. The NTD defines a major mechanical system failure as a failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or starting the next scheduled revenue trip because vehicle movement is limited or due to safety concerns.
Employee Injuries	Below Occupational Safety and Health Administration (OSHA) industry average
Red Signal Overruns	Target developed to promote and deliver strategic changes to reduce the likelihood and occurrence of unauthorized signal overruns.

CY2023 TARGETS

Rail Safety Performance Targets National Public Transportation Safety Plan Safety							
Mode of Service	**Fatalities (total)**	**Fatalities (per 100k miles)**	**Injuries (total)**	**Injuries (per 100k miles)**	**Safety Events (total)**	**Safety Events (per 100k miles)**	**System Reliability**
Rail	1 or fewer	0.44	< 13	0.55	< 41	1.35	15,000

Agency Elected Safety Performance Targets		
Mode of Service	**Employee Injuries**	**Red Signal Overruns**
Rail	< 6.70	< 23

5.0 DEVELOPMENT AND IMPLEMENTATION OF SAFETY MANAGEMENT SYSTEMS

5.1 INTRODUCTION

Safety Management System (SMS) is a formal, top-down, organization-wide, data-driven approach to managing safety risk and assuring the effectiveness of safety risk mitigations and its complexity can be adjusted to meet an agency's size and function(s).

As outlined in this document, the FTA's SMS framework consists of four main components: Safety Management Policy, Safety Risk Management, Safety Assurance, and Safety Promotion.

The Safety Management Policy component is the written foundation of Valley Metro's SMS. It formally and explicitly commits the agency to the development and implementation of the organizational structure and resources necessary to sustain the safety management processes and activities of an SMS.

The Safety Risk Management component is comprised of the processes, activities, and tools that Valley Metro uses to identify and analyze hazards and to assess safety risks in operations and supporting activities. It allows Valley Metro to examine what could cause harm, to determine whether sufficient precautions have been taken to minimize the harm or if further mitigations are necessary.

The Safety Assurance component ensures that mitigations are implemented, adhered to, appropriate, effective, and sufficient in addressing the potential consequences of identified hazards. Mitigations developed under the Safety Risk Management component are handed-off to Safety Assurance to review the data to determine if the mitigations were effective and to ensure no new risks have been created through implementation of the mitigations. Safety Assurance also ensures that the SMS is effective in meeting Valley Metro's goals and performance targets.

The Safety Promotion component provides visibility of executive management's commitment to safety and fosters improved safety performance by increasing safety awareness through communication and training.

5.2 SMS IMPLEMENTATION PLAN

The SMS Implementation Plan consists of four phases: orientation and familiarization, planning and organizing, safety risk management, and safety assurance. A brief overview of each of these phases is provided below. A detailed SMS Implementation Plan is provided in Appendix F.

5.2.1 ORIENTATION AND FAMILIARIZATION

Activities in the Orientation and Familiarization phase include obtaining Executive Commitment, conducting SMS orientation and awareness presentations, and distributing documentation to familiarize employees and contractors with SMS. These activities are discussed in further detail throughout the remainder of this document.

5.2.2 PLANNING AND ORGANIZATION

Activities in the Planning and Organization phase include developing the SMS implementation plan, developing documentation related to the safety management policy and safety performance objectives, and developing and establishing safety communication and employee reporting methods.

Safety roles and responsibilities for key personnel and key safety and security related committees are described below in Section 6.2, clearly illustrating the SSQA division is not the only group responsible for safety.

5.2.3 SAFETY RISK MANAGEMENT

Safety risk management activities are outlined in section 7.0 of this document.

5.2.4 SAFETY ASSURANCE

Safety assurance activities are outlined in section 8.0 of this document.

6.0 SAFETY MANAGEMENT POLICY

6.1 SAFETY MANAGEMENT POLICY STATEMENT

Valley Metro is committed to achieving compliance with statutory requirements specified in the following federal laws and rules: 49 U.S. Code § 5329 Public Transportation Safety Program / Fixing America's Surface Transportation (FAST Act); 49 CFR Part 674, State Safety Oversight; 49 CFR Part 673 Public Transportation Agency Safety Plan; 49 CFR Part 672, Public Transportation Safety Certification Training Program; 49 CFR Part 670, National Public Transportation Safety Program; 49 CFR Part 630, National Transit Database; 49 CFR Part 625, Transit Asset Management; and Arizona Department of Transportation's Rail Transit Safety and Security Oversight Program Standard.

The management of safety is one of our core business functions. Valley Metro is committed to developing, implementing, maintaining, and constantly improving processes to ensure that all our transit service delivery activities take place under a balanced allocation of organizational resources, aimed at achieving the highest level of safety performance and meeting established standards. Safety objectives include continuing to ensure employee and passenger safety, continually improving safety performance by setting safety performance targets, and implementing a Safety Management System (SMS) program.

All levels of management and all employees are accountable for the delivery of this highest level of safety performance, starting with the Chief Executive Officer (CEO).

Valley Metro's commitment is to:

- **Support** the management of safety through the provision of appropriate resources, that will result in an organizational culture that fosters safe practices, encourages effective employee safety reporting and communication, and actively manages safety with the same attention to results as the attention to the results of the other management systems of the organization.
- **Integrate** the management of safety among the primary responsibilities of all managers and employees.
- **Clearly define** for all staff, managers, and employees alike, their accountabilities and responsibilities for the delivery of the organization's safety performance and the performance of our safety management system.
- **Establish and operate** hazard identification and analysis, and safety risk evaluation activities, including an employee safety reporting program as a fundamental source for safety concerns and hazard identification, to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to a point which is consistent with our acceptable level of safety performance.
- **Ensure** that no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures.

- **Comply** with, and wherever possible, exceed legislative and regulatory requirements and standards;
- **Ensure** that sufficient skilled and trained human resources are available to implement safety management processes;
- **Ensure** that all staff are provided with adequate and appropriate safety related information and training, are competent in safety management matters, and are allocated only tasks commensurate with their skills;
- **Establish and measure** our safety performance against realistic and data-driven safety performance indictors and safety performance targets;
- **Continually improve** safety performance through management processes that ensure that appropriate safety management action is taken and is effective; and
- **Ensure** externally supplied systems and services to support our operations are delivered meeting our safety performance standards.

Approved by:

Jessica Mefford-Miller
Valley Metro
Chief Executive Officer

5/18/23

Date

6.2 SAFETY ACCOUNTABILITIES AND RESPONSIBILITIES

6.2.1 OVERVIEW

Valley Metro's CEO is the Accountable Executive of the Agency Safety Plan (ASP). Day-to-day responsibility for the ASP and coordination with the Rail State Safety Oversight (SSO) agency has been delegated to the Chief Safety Officer. The ASP is available to all Valley Metro and contractor personnel on the agency's intranet. One of the processes used by Valley Metro to communicate the agency's Safety Policy statement from the Accountable Executive is to post it in employee break rooms in the agency's facilities at the Operations & Maintenance Center, Corporate Offices in the 101 Building, the Mobility Center, the East Valley Bus Maintenance Facility, and the Greenfield Bus Maintenance Facility. Additional processes used to communicate safety messages are described in section 9.1.2.

The Arizona Department of Transportation is the designated Rail State Safety Oversight Agency. The ADOT System Safety Program Standard governs and directs Valley Metro's ASP for revenue and construction operations. ADOT has also developed SSO Program Procedures that direct accident reporting, investigations, safety audits, and other activities.

All Valley Metro employees and contractors are responsible for safety. Appendix E *Organizational Charts /Reporting Structures* provides a high-level view of Valley Metro's organizational structure. An overview of the lines of authority for safety, accountabilities and responsibilities for various roles, and a summary of safety-related meetings/committees is provided below.

6.2.2 LINES OF AUTHORITY FOR SAFETY

Safety responsibilities at each organizational level are:

- **Chief Executive Officer** – is vested with the primary responsibility for the activities of Valley Metro and overall safety performance and SMS.
- **Deputy Directors/Directors/Chiefs** - are responsible for promulgating Valley Metro's safety policies and for holding managers accountable for the safety performance within their respective divisions/divisions.
- **Managers/Supervisors** - are directly accountable and responsible for safety performance within their functional area in an ongoing and interactive process. This responsibility includes determining and implementing measures to counteract safety hazards and to mitigate known or potential hazards within their functional area.
- **Valley Metro employees, contractors, and sub-contracted personnel** - are responsible for performing their work safely and in accordance with established SMS requirements for the protection of themselves, co-workers, customers, facilities, and equipment. This responsibility is, at a minimum, per this plan and all currently published Valley Metro safety policies. As described later in this document, Valley Metro provides a direct connection to the Safety team by providing a webpage, email addresses, phone numbers, and hardcopy comment cards. Concerns about safety issues may also be addressed directly to the CEO, Director, SSQA, the Manager of Transit Safety, and/or the Rail Safety Specialist.

6.2.3 ACCOUNTABLE EXECUTIVE

The Chief Executive Officer (CEO) is the accountable executive for the safety program. The Accountable Executive's safety-related roles include:

- Reviewing and accepting this plan
- Implementing the policy statement as outlined in section 6.1

- Ensuring Valley Metro's Safety Management Systems (SMS) is effectively implemented throughout Valley Metro's transit system
- Ensuring action is taken to address substandard performance in Valley Metro's SMS
- Allocating staff time and resources to carry out the provisions of this plan, including appointing a Chief Safety Officer
- Reviewing and approving project specific Safety and Security Certification Verification reports

6.2.4 CHIEF SAFETY OFFICER (CSO)

The Accountable Executive/CEO has appointed the Director of Safety, Security and Quality Assurance (SSQA) as the CSO for Valley Metro. The CSO reports directly to the Accountable Executive/CEO. The CSO is adequately trained per 49 U.S.C 5329 673.5 and has the authority and responsibility for day-to-day implementation and operation of Valley Metro's SMS. The CSO does not serve in any operational or maintenance capacities. Within three years of hire, the CSO will obtain PTSCTP certification and will pursue obtaining safety certification with the World Safety Organization or similar safety certifying organization.

This position's safety-related roles include:

- Communicating with Executive Team members and the Accountable Executive/CEO through Leadership Team meeting and providing periodic reports for the CEO
- Allocating staff time and resources to carry out the provisions of this plan
- Ensuring safety and security measures are incorporated into the design and construction of new rail systems through design reviews and the Safety and Security Certification Program
- Ensuring compliance with Federal Transit Administration (FTA), State Safety Oversight (SSO), Transportation Security Administration (TSA) regulations, and TSA criteria by conducting emergency drills, investigating accidents, and providing oversight of recordkeeping related to accidents and incidents
- Reviewing reports of injury, property damage, occupational diseases, or public liability accidents and overseeing investigations, as needed, to determine root cause and prevent loss reoccurrences
- Reviewing and overseeing system safety programs and audits of facility inspections, operator and maintenance training requirements and certifications, and standard operating procedures
- The CSO has authority to order operations be terminated if an imminent hazard is detected

6.2.5 MANAGER, TRANSIT SAFETY

The Manager, Transit Safety reports to the Director, SSQA. The Manager, Transit Safety's job duties include:

- Planning, developing, implementing, modifying, and administering a comprehensive System Safety Program in conjunction with a Safety Management System (SMS) to ensure compliance with applicable laws, codes, regulations, and guidelines, including acting as the agency's SMS Implementation Manager
- Overseeing all aspects of Valley Metro's system safety program
- Conducting scheduled and unscheduled inspections of Valley Metro and contractor work sites to identify workplace hazards, propose corrective actions, and ensure staff and contractor compliance with applicable standards
- Investigating safety and health complaints and concerns
- Reviewing reports of injury, property damage, occupational diseases, or public liability accidents and overseeing investigations, as needed, to determine root cause and prevent loss reoccurrences
- Working with the Rail Safety Specialists to ensure time and resources are available to carry out the provisions of this plan

- Developing and implementing goals, objectives, policies, procedures, standards and guidelines for achieving safety program compliance
- Managing and responding to safety incidents and emergency response on a 24-hour basis
- Reviewing plans for new construction and modification to existing structures
- Providing leadership, vision, and guidance for Valley Metro's safety program

6.2.6 RAIL SAFETY SPECIALIST

The Rail Safety Specialist reports to the Manager, Transit Safety. The Rail Safety Specialist's job duties include:

- Implementing and monitoring occupational health and safety program activities including facility inspections, accident investigations, and emergency planning operations
- Providing technical safety information and compliance requirements to management, employees, and contractor work to promote Safety Management Systems (SMS)
- Providing education to staff on safety related topics and responding to safety issues and concerns
- Assisting with safety oversight of contractors and construction projects, as required
- Compiling, analyzing, and interpreting statistical data to prepare written and oral reports
- Assisting with incident and accident investigations involving the public, contractors, and employees which involve Valley Metro personnel and/or property, determining cause, providing solutions, and creating regulatory agency-required reports

6.2.7 MANAGER, TRANSIT SECURITY

The Manager, Transit Security reports to the Director, SSQA. The Manager, Transit Security's job duties include:

- Planning, developing, implementing, administering and modifying a comprehensive System Security Program which includes emergency response and recovery to ensures compliance with applicable laws, codes, regulations and guidelines
- Conducting or providing for security and emergency preparedness training
- Overseeing the coordination of security activities for Valley Metro Operations
- Managing and responding to security incidents and emergency response on a 24 hour on-call basis
- Developing and implementing goals, objectives, policies, procedures, standards, and guidelines for achieving program compliance
- Investigating security complaints submitted by management, employees, committee members, and the public and/or regulatory agencies; conducting concurrent security investigations, supplemental reporting and risk analysis assessment; evaluating concerns and alternatives, resolving complaints, and making recommendations to senior management for corrective action
- Interfacing with local law enforcement agencies to pursue convictions of criminal activity on Valley Metro property
- Serving as liaison with Valley Metro member agencies and with Federal, State, and Local emergency and police/fire services personnel
- Reviewing plans for new construction and modification to existing structures
- Conducting scheduled and unscheduled security inspections of Valley Metro and contractor work sites, facilities and locations to ensure staff and contractor compliance with program standards, contract requirements, and applicable laws, codes, regulations and guidelines
- Conferring with and coordinating activities with Valley Metro, contractor staffs, and public agencies to establish and implement an emergency action plan that complies with federal requirements and meets the need of state and local emergency operations center during a crisis

situation. Acts as a liaison with State emergency management in place of the Director as needed

6.2.8 SECURITY COORDINATOR

The Security Manager reports to the Manager, Transit Security. The Security Coordinator's job duties include:

- Working with and monitoring contractors engaged in performing security work (Security Services Contractor) and ensuring adherence to agency security requirements
- Participating in internal, local, and regional security, and/or emergency preparedness working groups and committees
- Assisting in the maintenance of an annual comprehensive security facility risk and vulnerability assessment and inspection program
- Developing standards, protocols and procedures to ensure a secure environment for customers, employees and contractors
- Building and maintaining rapport with Valley Metro member cities, State Safety oversight, and local law enforcement
- Analyzing threats and vulnerabilities of agency owned and leased facilities, including the transit system and its assets; notifying management and applicable stake holders of risks; providing recommendations to management for mitigating risks; and developing and implementing plans, processes and/or procedures as required

6.2.9 SAFETY AND SECURITY PROGRAM MANAGER

Safety responsibilities for the Safety and Security Program Manger include, but are not limited to:

- Coordinating reporting functions to the Federal Transit Administration (FTA) and Arizona Division Of Transportation (ADOT) for safety certification and verification and safety compliance work; creating reports necessary for project certification, audit compliance and safety certification related to projects
- Assisting in the coordination and attending the Safety and Security Certification Review Committee (SSCRC), Fire/Life Safety and Security Committee (FLSSC), Safety and Security Readiness Review (SSRR) and Safety and Security Certification Verification Report (SSCVR) meetings associated with a project(s)
- Assisting and reviewing possible modifications to existing and new specifications related to Project Certification and ADOT/FTA compliance
- Working in collaboration with the Capital Development Division to ensure that certification processes are effectively integrated and executed according to schedule
- Participating in Project Design phases to ensure that Safety and Security checklists are incorporated into the design; ensuring Design Criteria Manual (DCM) standards are not in conflict with Project Design related to Safety and Security
- Coordinating Safety and Security Management Plan (SSMP), Safety and Security Certification Plan (SSCP), conducting and/or assisting in quality assurance auditing and all other certification standards to the Project Managers, design, and construction contractors
- Prepares a variety of reports summarizing program data; analyzes related data and makes recommendations based on findings
- Assisting with development and implementation of safety certification plan and development of safety certifiable items list
- Assisting in coordinating Pre-Revenue Operations (PRO) and Revenue Service certification

activities between Safety and Security and project leads
- Providing training and assisting the PM/CM, Contractor, sub-contractors, and Valley Metro staff in the certification process and deliverables
- Developing and implementing goals, objectives, policies, procedures, standards, and guidelines for achieving program compliance

6.2.10 MANAGER, QUALITY ASSURANCE

The Manager, Quality Assurance reports directly to the CEO, with day-to-day activities being addressed by the Director, SSQA. Quality Assurance is a stand-alone program. This role works with the Manager, Transit Safety and Manager, Transit Security to ensure that the internal workings of the SSQA Division are in accordance with all ADOT and FTA published standards.

6.2.11 SENIOR PROJECT COMPLIANCE COORDINATOR

The Senior Project Compliance Coordinator reports to the Manager, Quality Assurance. This role is responsible for assisting with or performing quality assurance audits and reviews in accordance with FTA/ADOT requirements and Valley Metro policies, procedures, and standards.

6.2.12 CHIEF OPERATIONS OFFICER

The Chief Operations Officer (COO) is responsible for overseeing the operations and maintenance of all aspects of transit service delivery; managing, supervising, and coordinating staff/resources and activities associated with rail and fixed-route operations.

Safety responsibilities for the Chief Operations Officer or designee include, but are not limited to:

- Monitoring for safe operations and maintenance of the rail system
- Allocating staff time and resources necessary to carry out the provisions of this plan
- Reviewing and approving compliance at each stage of a System Modification and the Safety and Security Certification Program for extensions and major capital projects
- Providing operations and maintenance input for system safety activities
- Participating and/or assigning a designee to attend Safety and Security Committee meetings
- Collaborating with the safety team to develop and implement corrective action plans for safety issues and ongoing changes/modifications to the system
- Reviewing and staying current with all safety rules and procedures governing operation and maintenance of the rail and bus systems
- Ensuring maintenance of the Transportation Rule Book, Standard Operating Procedures, and Emergency Operating Procedures
- Chairing the working group responsible for the annual review and revision of the Transportation Rule Book
- Providing responsibility and oversight of all Valley Metro Rail and Bus operations such as Maintenance of Way, Maintenance of Equipment, and rail and bus transportation services contractors retained by Valley Metro (Transportation Services Contractor(s), Cleaning Contractors, etc.)

6.2.13 DIRECTOR, CAPITAL DEVELOPMENT

This division is responsible for corridor and facility planning, system and service changes, grant applications, onboard surveys, sustainability and system maps, design and construction management, project controls, quality management, facility public art and utilities.

Safety responsibilities for the Director, Capital Development or designee include, but are not limited to:

- Allocating staff time and resources necessary to carry out the provisions of this plan

- Ensuring Valley Metro's design and construction efforts comply with safety provisions of the design criteria, construction specifications, Safety and Security Management Plan and the Safety and Security Certification Plan
- Notifying the Director, SSQA of the transition to engineering for capital projects via a memo notification signed by the project manager and the Capital Development Director
- Ensuring all design drawings and documents are reviewed for and incorporate Crime Prevention Through Environmental Design (CPTED) in all phases and aspects of design and system changes
- Supporting the Valley Metro Operations Division with project planning with respect to impacts to operations, modifications and construction projects affecting the rail system adhering to section 8.0 of this document
- Monitoring compliance with reporting on project design and construction status and initiating corrective action to ensure activities are being conducted in accordance with this document and applicable Safety and Security Certification Plans
- Developing and implementing corrective action plans as needed in response to system safety open items, ensuring such items are tracked, through design and engineering and into construction and/or repair efforts
- Ensuring all contractors and sub-tier contractors are in full compliance with Valley Metro's safety requirements as described in this document, with additional safety requirements as set forth by the SSQA Division, and with the contractor's own safety requirements
- Gathering data related to workplace accidents and incidents that are a result of construction work and reports the information to the SSQA division

6.2.14 DIRECTOR, COMMUNICATIONS AND STRATEGIC INITIATIVES

This division is responsible for agency marketing, passenger communications, media relations, commute solutions, business assistance and community outreach.

Safety responsibilities for the Director, Communications and Strategic Initiatives include, but are not limited to:

- Coordinating and disseminating Valley Metro's safety messages to Local, State, and Federal governments and the general public
- Interfacing with Director, SSQA by reviewing LRV collision history, developing safety campaigns ideas, and establishing a portion of the marketing budget for safety messages
- Periodically receiving initial Fact Reports and Collision Logs and discussing with the Director, SSQA as applicable
- Creating, modifying, and otherwise amending (with the review by the Director, SSQA) the Crisis Management Plan
- Providing a comprehensive plan for disseminating information to local media outlets in a timely manner and in such a way as to keep Valley Metro Safety and Security resources free to conduct business related to the ongoing event
- Ensuring data or statistics published by various Valley Metro divisions are vetted prior to release through the Communications and Strategic Initiatives Division.
- Being aware of upcoming drills, exercises, other scheduled activities in which there may be public involvement or public perception of a crisis, or other media worthy activity. Providing communication from Valley Metro to the specific media concern for same.

6.2.15 DEPUTY DIRECTOR, CONSTRUCTION

The Deputy Director, Construction is responsible for leading the rail capital development program for

Valley Metro's Capital Development Division.

Safety responsibilities for the Deputy Director, Construction include, but are not limited to:

- Allocating staff time and resources necessary to carry out the provisions of this plan
- Ensuring Valley Metro's design and construction efforts comply with safety provisions of the design criteria, construction specifications, Safety and Security Management Plan and the Safety and Security Certification Plan
- Ensuring all design drawings and documents are reviewed for and incorporate CPTED in all phases and aspects of design and system changes
- Supporting the Valley Metro Operations Division with project planning with respect to impacts to operations, modifications and construction projects affecting the rail system adhering to section 8.0 of this document
- Monitoring construction status and initiating corrective action to ensure activities are being conducted in accordance with this document and applicable Safety and Security Certification Plans
- Developing and implementing corrective action plans as needed in response to system safety open items, ensuring such items are tracked, through design and engineering and into construction and/or repair efforts
- Ensuring all contractors and sub-tier contractors are in full compliance with Valley Metro's safety requirements as described in this document, with additional safety requirements as set forth by the SSQA Division, and with the contractor's own safety requirements
- Gathering data related to workplace accidents and incidents that are a result of construction work and reports the information to the SSQA division

6.2.16 DEPUTY DIRECTOR, STATE OF GOOD REPAIR/MAINTENANCE

The Deputy Director, State of Good Repair/Maintenance is responsible for delivering high-quality, customer-focused maintenance and facilities management of Valley Metro's growing rail network to provide safe and reliable service across the regional rail system.

Safety responsibilities for the Deputy Director, State of Good Repair include, but are not limited to:

- Monitoring for safe operations and maintenance of the rail system
- Allocating staff time and resources necessary to carry out the provisions of this plan
- Reviewing and approving compliance at each stage of a System Modification and the Safety and Security Certification Program for new rail vehicles, system extensions, and major capital projects
- Providing maintenance input for system safety activities
- Participating and/or assigning a designee to attend Safety and Security Committee meetings
- Collaborating with the safety team to develop and implement corrective action plans for safety issues and ongoing changes/modifications to the system
- Coordinates, when necessary, with the Deputy Director, Transportation and Project Integration, Transportation Services Contractor's, Security Services Contractor, Facilities Maintenance Manager (and associated contractors), Maintenance of Way Manager, Superintendent of Rail Maintenance, and LRV Maintenance staff
- Reviewing and staying current with all safety rules and procedures governing operation and maintenance of the rail system
- Providing responsibility and oversight of all rail maintenance activities including Maintenance of Way, Maintenance of Equipment, and Facilities Maintenance and contractors retained by Valley Metro (Cleaning Contractors, and Facilities Maintenance Contractors)

6.2.17 DEPUTY DIRECTOR, TRANSPORTATION SERVICES AND PROJECT INTEGRATION

The Deputy Director, Transportation Services and Project Integration is responsible for delivering high quality, customer-focused fixed-route bus transportation, rail transportation, project integration, and customer service.

Safety responsibilities for the Deputy Director, Transportation Services and Project Integration include, but are not limited to:

- Working with and monitoring the Transportation Services Contractor to ensure compliance with Valley Metro's safety and security requirements
- Taking immediate action to manage, mitigate, and resolve any system or facility situation that would cause a delay or loss of rail/fixed-route service
- Coordinates when necessary with Deputy Director, State of Good Repair/Maintenance, Transportation Services Contractor's, Security Services Contractor, Facilities Maintenance Manager (and associated contractors), Maintenance of Way Manager, and Valley Metro LRV Maintenance
- Complying with all applicable state, federal, and local environmental requirements, and all aspects of safety during work activities
- Participates in and ensures compliance with Valley Metro internal safety and security audits
- Participates in the development of regional policies and planning for operations, fare policy, agency coordination, special events, and system startup.

6.2.18 MANAGER, CONTRACTS/PROCUREMENT

Safety responsibilities for the Manager, Contracts/Procurement include, but are not limited to:

- Support the Operations and Maintenance division in ensuring that safety related materials and services are evaluated by SSQA for safety implications prior to purchase and/or use
- Ensuring that the Director, SSQA or designee is included in capital procurements as required
- Ensuring that procurement records are retained using the System of Record CORE
- Ensuring outside contractors are provided the Valley Metro safety and security requirements prior to job bid and that such requirements are clearly conveyed in the procurement and contract documents (Special Provisions #16 & #17)

6.2.19 SUPERINTENDENT, LRV MAINTENANCE

The Superintendent, LRV Maintenance reports to the Deputy Director, State of Good Repair/Maintenance, and oversees the maintenance of rail revenue service vehicles. Safety-sensitive roles that report to this individual include LRV Maintenance Supervisors, LRV Mechanics and Electro-Mechanics, a Technical Trainer, a Lead Inspector/Cleaner, LRV Inspectors, and a Lead Truck Shop Mechanic. The team's work includes, but is not limited to:

- Conducting preventive maintenance, corrective maintenance, cleaning, and immediate response to disabled vehicles throughout the system for the rail vehicles in the fleet
- Assisting with start-up activities for rail system extensions and major capital projects
- Taking immediate action to manage any LRV situation that would cause a delay or loss of rail system service in the shop, yard, yard lead, or mainline
- Coordinating effectively with the Transportation Services Contractor, Facilities Maintenance Contractor, Security Services Contractor, and Valley Metro MOW
- Complying with all applicable state, federal and local environmental requirements, including the agency's Transit Asset Management program, and effectively managing state of good repair for all transit assets

- Moving all rail vehicles within the yard and shop that relate to vehicle maintenance (only qualified personnel shall operate LRVs)
- Responsibility for all aspects of shop and LRV maintenance safety
- Participating in and ensuring compliance with Valley Metro internal safety and security audits

6.2.20 FACILITIES MAINTENANCE MANAGER

The Facilities Maintenance Manager is a direct employee of Valley Metro and is responsible for the safety performance of both Valley Metro employees and retained contractors and sub-contractors under their responsibility. The Facilities Maintenance Manager shall implement elements of this document with the same authority and responsibilities for both direct employees and sub-contractors under their responsibility**.** Main sub-contractors shall also be responsible to the Facilities Maintenance Manager for full compliance to this document. The provision for sub-tier contractor enforcement of this document shall fall solely to the main sub-contractor. Proof of such compliance shall be made available to the Facilities Maintenance Manager upon request.

Facilities Maintenance Contractors encompass many differing aspects of the day-to-day operations of both the Bus and Rail OMC campuses and revenue alignment maintenance. Responsibilities include but are not limited to items such as building maintenance, landscaping, facilities equipment, repair and other, as needed and contracted services as designated through the Valley Metro Facilities Maintenance Manager.

At minimum, employees and contractors reporting to Valley Metro's Facilities Maintenance Manager shall:

- Be responsible for ensuring delivery of safety requirements to their personnel, regardless of scope or time of contract. These requirements include an understanding and acknowledgement of this document, the contractor's own published and Valley Metro-approved safety requirements, Valley Metro's Transit Asset Management program, and effectively managing state of good repair for all transit assets.
- Be trained in the day-to-day safety requirements of Valley Metro's operating system, including documentation and certifications as proof of compliance. This documentation is kept with the Valley Metro Facilities Maintenance Manager.
- Take immediate action to manage, mitigate and resolve facility or alignment situations related to Facilities Maintenance that would cause a delay or loss of the rail system service, or that present a safety or security hazard as defined by the observer.
- Coordinate effectively with the Transportation Services Contractor, Security Services Contractor, Valley Metro MOW, and Valley Metro LRV Maintenance.
- Comply with all applicable state, federal and local environmental requirements. Proof of such compliance shall reside with the Valley Metro Facilities Maintenance manager.
- Respond to any reasonable request from OCC, Maintenance of Way (MOW), Facilities Maintenance Manager, or LRV Maintenance to ensure safe and on time rail system operations.
- Maintain Park-and-Ride facilities and equipment located therein in accordance with Valley Metro requirements.
- Reports immediately to the Manager, Transit Safety or Safety Specialist, ANY injury of their employees or other employees, regardless of affiliation. Reporting must take place within the specified timeline and requirements of the current Valley Metro injury reporting guidelines
- Participating in and ensuring compliance with Valley Metro internal safety and security audits
- Performing preventative and corrective maintenance associated with rail and bus facilities and facilities related systems/equipment.

- Performing cleaning operations in support of rail and bus facilities.
- Performing landscape maintenance operations in support of rail and bus facilities.

6.2.21 MAINTENANCE OF WAY (MOW) MANAGER

The Maintenance of Way Manager is responsible for ensuring delivery of Valley Metro's safety requirements and compliance with the Transit Asset Management plan for state of good repair for all transit assets under their control. Safety-sensitive roles that report to this individual include an Assistant Manager, Supervisors, Technical Trainers, Signal Technicians, Communication Technicians, Traction Power System Technicians, the Supervisory Control and Data Acquisition (SCADA) Systems Administrators, and Track Maintainers. Other safety-related duties of this team include, but are not limited to:

- Performing all preventative and corrective maintenance associated with the following MOW and system elements of the rail system: Operations Control Center (OCC), Traction Electrification System (TES), Signals and Communications, Art (ancillary support only), Track, and Ticket Vending Machines (TVM).
- Training all personnel and maintaining the associated documentation and certifications
- Taking immediate action to manage, mitigate, and resolve any system or facility situation that would cause a delay or loss of the rail system service
- Coordinate with the Transportation Services Contractor, Security Services Contractor, Facilities Maintenance Manager (and associated contractors), and Valley Metro LRV Maintenance
- Complying with all applicable state, federal, and local environmental requirements, and all aspects of safety during work activities
- Responding to any reasonable request from OCC to ensure safety and on-time rail performance
- Participating in and ensuring compliance with Valley Metro internal safety and security audits

6.2.22 MANAGER, RAIL OPERATIONS

The Manager, Rail Operations is a direct employee of Valley Metro and reports to the Chief Operations Officer. Safety-related duties for this role include, but are not limited to:

- Working with and monitoring the Transportation Services Contractor to ensure compliance with Valley Metro's safety and security requirements
- Chairing the Rail Activation Committee
- Taking immediate action to manage, mitigate, and resolve any system or facility situation that would cause a delay or loss of the rail system service
- Coordinate with the Transportation Services Contractor, Security Services Contractor, Facilities Maintenance Manager (and associated contractors), Maintenance of Way Manager, and Valley Metro LRV Maintenance
- Complying with all applicable state, federal, and local environmental requirements, and all aspects of safety during work activities
- Participating in and ensuring compliance with Valley Metro internal safety and security audits
- Assisting in startup activities for rail extensions and major capital projects

6.2.23 TRANSPORTATION SERVICES CONTRACTOR

The Manager of Safety and Training for the transportation services contractor is responsible for ensuring the delivery of safety requirements per this plan and Valley Metro policies and procedures. As discussed in sections above, the Transportation Services Contractor is managed by the Manager, Rail Operations, and the Chief Operations Officer. This individual is also responsible for:

- Assisting with start-up activities for Valley Metro rail system extensions and major capital projects

- Coordinating with event and activity centers along the rail corridors to ensure staffing levels are suitable to support the event or activity
- Providing qualified train operators, supervisors, managers, administrative and support staff, and OCC staffing and supervision for operation of the rail system.
- Providing track access training prior to being granted access to the revenue alignment. These other agencies include but are not limited to: Valley Metro direct employees, Valley Metro construction contractors, Valley Metro facility contractors, First Responder groups who routinely access the alignment during their normal course of duties, and any other contractor who may have access to the revenue alignment.
- Making notifications and investigating accidents in accordance with Valley Metro's Accident Incident Investigation Plan.
- Ensure compliance with the safety elements in Valley Metro's policies and operating procedures

6.2.24 SECURITY SERVICES CONTRACTOR

This contractor is responsible for providing fare inspection and crime prevention services on the rail system. Security officers check passengers to ensure they have proper fare. Security officers also maintain a visible presence on trains and platforms to deter criminal activity. As discussed in sections above, the Security Services Contractor is managed by the Security Coordinator and the Manager, Transit Security.

6.2.25 FIRE/LIFE SAFETY AND SECURITY COMMITTEE

The purpose of the Fire/Life Safety and Security Committee (FLSSC) is to serve as a liaison between Valley Metro and external emergency services. The FLSSC is formed for extensions and major capital projects. It is also formed on an as needed basis for the preparation and coordination of tabletop and/or emergency drills and for review of design drawings to ensure compliance to city Fire codes and CPTED principles.

The FLSSC is composed of representatives from local fire/rescue and police jurisdictions, local emergency management agencies, and Valley Metro Safety and Security, engineering, construction management staff and Operations staff. The Director, SSQA serves as the chair of the FLSSC and other staff will participate as needed.

6.2.26 SAFETY AND SECURITY CERTIFICATION REVIEW COMMITTEE

The Safety and Security Certification Review Committee (SSCRC) is responsible for assessing hazards, threats, and overseeing compliance with the Valley Metro Safety and Security Certification Program for rail extensions, major capital projects, and major modifications to the rail system as detailed in the applicable specific project Safety and Security Certification Plan. The SSCRC is responsible for:

- Reviewing documentation (evidence of conformance to safety and security requirements), assigning responsibilities for open safety and security issues, approving certification documentation, conducting site visits, and defining safety and security related tests and analyses, as required
- Determining the specific method to mitigate specific conditions, potential hazards, or threats
- Determining whether to accept specific conditions or require mitigating measures, including providing recommendations to the designers regarding certification and noncompliance of system elements

The SSCRC is formed for extensions, major capital projects, and major modifications with a threshold of more than $99 million and is composed of senior Valley Metro management personnel, design, operations, construction management, maintenance contractor personnel, appropriate consultant(s), and construction contractor personnel. The SSCRC is chaired by the Director, SSQA. Projects less than $99 million and with limited scope or change to the overall system will be vetted by the Rail Change Review

Committee as a system modification along with a hazard assessment signed by the Chief Operations Officer and Director, SSQA.

6.2.27 SAFETY AND SECURITY COMMITTEE

Compliant with the Bipartisan Infrastructure Law § 5329(d)(5), Valley Metro fosters a joint labor-management Safety & Security Committee (SSC). The Safety and Security Committee typically convenes monthly and is responsible for:

- Identifying and recommending risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through Valley Metro's safety risk assessment process.
- Identifying mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended.
- Identifying safety deficiencies for purposes of continuous improvement
- Reviewing and approving updates to the Agency Safety Plan

The Committee elects a Chair and is comprised of agency and contracted staff. The Committee maintains an equal number of frontline employee representatives, and management representatives. Division/Departments represented in the SSC are:

- Safety
- Security
- Operations
- Facilities Maintenance
- Maintenance of Way
- LRV Maintenance
- Transportation Services Contractor
- Security Services Contractor

The Safety & Security committee welcome the attendance of internal/external stakeholders such as Risk Management (VM) and ADOT SSO to attend, and on occasion present information at monthly meetings. Such stakeholders are considered non-voting members and participate in an oversight/advisory capacity.

6.2.28 REGIONAL SECURITY TEAM

The purpose of the Regional Security Team (RST) is to provide a forum for the regional security stakeholders to share information, align on specific regional issues and coordinate issues on a regional level. The RST is chaired by Valley Metro's Director, SSQA, or designee. The RST is comprised of representatives from Phoenix Police Department, Tempe Police Department, Mesa Police Department, Transportation Security Administration, and Valley Metro's security contractor. The RST typically meets every other month; however, Valley Metro communicates regularly with all law enforcement as needed.

6.2.29 SPECIAL EVENTS

Valley Metro plays an integral role in numerous special events, from local/regional, to national and international. Over the years, the agency has developed excellent working relationships with public safety personnel as well as with city leaders and other Valley Metro divisions in the proper planning and execution of mega events.

Depending on the scope of the event, Valley Metro is a member of planning committees well in advance and participates in exercises and after-action discussions. Valley Metro ensures participation in all required meetings during the pre-planning, planning, operational period and after action for all special

event requests requiring transit participation. These requests are initiated by public safety personnel and planners, city leaders, division heads to the Director, SSQA.

Valley Metro logs any exercises pertaining to special event planning into the Training and Exercise Calendar which is maintained by Valley Metro's SSQA division.

Large scale events lasting more than one calendar day or events large enough to initiate using the National Incident Management System protocol, may involve Valley Metro Operations, Communications, and Security staff working in the Emergency Operations Center as a regional stakeholder.

6.2.30 REGIONAL TRANSPORTATION ADVISORY GROUP

The Regional Transportation Advisory Group (RTAG) is comprised of Valley Metro and city staff from all member cities. This group meets monthly. Valley Metro's Director, SSQA provides a safety and security report and other information on an as needed basis.

6.2.31 RAIL MANAGEMENT COMMITTEE

The Rail Management Committee (RMC) is comprised of Valley Metro and City directors/managers from all member cities. This group meets monthly. Valley Metro's Director, SSQA provides quarterly safety and security reports. The Rail Management Committee provides briefings to the Valley Metro Board that include, but are not limited to, safety and security items, as necessary.

6.2.32 RAIL ACTIVATION COMMITTEE

The Rail Activation Committee (RAC) is responsible for managing and overseeing the execution of the Rail Activation Plan and is chaired by the Deputy Director, Transportation and Project Integration or designee. The RAC includes applicable Valley Metro managers, and may include contract managers, and members of Valley Metro's Executive Leadership Team as necessary. The RAC resolves policy issues and coordinates and directs activities of Valley Metro support divisions including Operations, Human Resources, Communications and Marketing, Capital Development, Safety, Security, and Quality Assurance, Information Technology and Finance. Members of the RAC participate in integrated system testing and help resolve issues identified during testing.

6.2.33 EXECUTIVE LEADERSHIP TEAM

The Leadership Team is comprised of the CEO and all Division Chiefs/Directors. The group conducts a "check in" each morning to review high priority items. Any critical safety and/or security items are shared with this group and addressed immediately, if necessary.

The group also meets weekly for more detailed discussions and items of significant importance. The Director, SSQA also provides a monthly report on safety, security, and quality assurance items directly to the CEO and the Leadership Team in the form of a monthly status report.

6.3 SMS DOCUMENTATION AND RECORDS

As prescribed by 49 CFR Part 673.31 Valley Metro will maintain documents that set forth and support its Agency Safety Plan, including those related to the implementation of the SMS program. Valley Metro will also maintain documents that are included in whole, or by reference, that describe the programs, policies, and procedures that the agency uses to execute its SMS. Documents will be retained for a minimum of three years and will be made available upon request to the FTA and ADOT SSOA.

6.4 HAZARDOUS MATERIALS

Valley Metro's Hazardous Material Program provides employees, contractors, passengers, and the general public with adequate safeguards against exposure to hazardous materials and is described in the Valley Metro Employee Safety Program Plan and Procedures (SOP 1500 series). The program applies to all Valley Metro, the Transportation Services Contractor, and other contractor personnel involved in the operation, maintenance, construction, modification, design, and repair of the Valley Metro rail system. Valley Metro, the Transportation Services Contractor, and all other contractors are required to institute policies and procedures for the safety and protection of the environment and persons who may encounter hazardous materials used in the rail system maintenance and operations.

Valley Metro makes every reasonable effort to protect people and the environment from potentially harmful effects of hazardous materials and waste. All persons subject to this program must comply with applicable local, state, and federal laws pertaining to environmental and personal protection, and to the use, handling, storage, and transportation of hazardous materials as defined by OSHA and Valley Metro safety policies. Areas of responsibility for these procedures include: spill response, clean-up and investigation; periodic audits of all facilities, properties, and projects; capital program review and advisement; authority policy and procedure review and implementation; and regulatory review and interpretation. Additionally, as part of Valley Metro's Internal Safety and Security Audit Program Plan, the SSQA division monitors and audits the program to ensure mechanisms against environmental damage and the constant safety of employees and passengers are in place and effective.

Valley Metro and contractor employees whose job duties expose them to hazardous materials receive initial training and periodic refresher training in hazardous materials identification, Safety Data Sheets (SDS), personal protective equipment (PPE), proper handling and disposing of hazardous materials, and emergency procedures in response to hazardous material spills.

All divisions and contract employees that encounter hazardous materials, either by accident or through purposeful use, must report any unintended contact to their respective division manager, contract holder, or supervisor immediately. Additionally, in adherence with the AIP, any unintended contact with hazardous materials requires immediate contact with Valley Metro's safety team electronically, in person, or in writing, and with the knowledge of the person's immediate supervisor.

Safety Data Sheets (SDS) for chemicals are available to all personnel working at the OMC or in the field. SDS are kept in accordance with OSHA standards and are available for viewing any time work is taking place in that specific area. This requirement applies to all products that meet the requirements as defined in accordance with OSHA regulations in 29 CFR part 1910. Copies of all SDS shall be submitted to the Phoenix Fire Division as required.

The use of PPE and care in following recommended guidelines is closely monitored by Valley Metro supervisors. Violations of procedures involving hazardous materials are considered serious and in specific situations can lead to termination of employment.

Valley Metro, the Transportation Services Contractor and all other contractors conduct periodic site assessments to monitor job and workplace hazards and environmental concerns. Assessment reports are forwarded to Valley Metro's Manager, Transit Safety to ensure issues and concerns are noted and addressed. Incidents are reviewed at the SSC meetings.

The Director, SSQA has direct oversight and responsibility for the implementation of and compliance with the various safety programs related to the handling of hazardous materials and waste. All safety procedures, whether from a Valley Metro contractor or from a Valley Metro division (Vehicle maintenance, MOW, etc.) are required to be reviewed and approved by the Director, SSQA or designee

prior to implementation. Individual outside contractors may possess safety procedures for the handling of hazardous materials that exceed those of Valley Metro, as a function of their day-to-day normal activities; however, these procedures still require the approval of SSQA prior to starting work.

Outside contractors or internal divisions that add potentially hazardous chemicals or material to their daily use must first inform Valley Metro Safety so their use may be reviewed and approved by Safety prior to purchase and initial use. The Procurement division shall maintain a comprehensive list of all SDS currently in use by Valley Metro divisions, including contractor-based, so that it may be ordered through the Valley Metro Procurement division. Once purchased, these items must be stored and used in areas in compliance with all applicable codes and standards.

6.4.1 CONSTRUCTION HAZARDS/VULNERABILITIES DOCUMENTATION

Hazards/Vulnerabilities identified during the design and/or construction phase of a specific project will be captured on a Preliminary Hazard Analysis (PHA), Operational Hazard Analysis (OHA), and/or a Threat and Vulnerability Assessment (TVA).

7.0 SAFETY RISK MANAGEMENT

A formal hazard identification, investigation, and resolution process is implemented by Valley Metro to ensure potential system hazards and risks are methodically identified, investigated, assessed, tracked, and resolved. Through this process, Valley Metro seeks to eliminate or minimize injuries to passengers, employees, and the general public while also preventing service delays and damage to property, equipment, and the environment.

If a hazard or potential hazard cannot be entirely mitigated, it is categorized by severity and probability of occurrence, analyzed for potential impact, and mitigated by design, procedures, warning devices or other methods so it falls within the prescribed level of risk acceptable to Valley Metro management.

This risk and hazard management policy applies to all employees, contractors, consultants, and any other person assigned by Valley Metro to have contact with any part of the system and obligates everyone to be constantly vigilant for potential and actual hazards. It covers all aspects of bus and rail facilities, equipment, vehicles, right-of-way, and work environments.

7.1 SAFETY HAZARD IDENTIFICATION

Hazard identification defines conditions and faults that have the potential to cause an accident. The first step in the process is to define the physical and functional characteristics of the system to be analyzed. These characteristics are presented in terms of the major elements, which make up the system: equipment, procedures, people, and environment. Knowledge of how the individual system elements interface with each other is essential to the hazard identification effort.

Valley Metro identifies potential hazards in a variety of ways, including:

- Design reviews where representatives of safety, security, design, construction, and operations participate
- Hazard analyses and special reports prepared by the FTA, ADOT SSO, other oversight authorities, consultants, Valley Metro, contractors, and suppliers
- Data from previous Valley Metro accidents/incidents or operating experience on existing similar rail transit systems
- Inspections, observations, and audits conducted by Valley Metro and external entities
- Observations and experiences of various stakeholders (public, passengers, employees, regulators) during construction, testing, and operations (SOP 1500.13 – Hazard Management – provides an outline of the process for staff at the OMC). Examples also include rider reports through customer service, e-alerts, etc.
- Accident, incident, and near-miss reports
- Employee reporting (described in more detail in section 9.1)

7.1.1 DATA ACQUISITION PROCESS

Valley Metro captures safety and security data and information for rail operations, maintenance, design, and construction activities.

Rail operations safety and security data is maintained by the Transportation Services Contractor as required by contract. The Transportation Services Contractor's safety and security data that is produced and distributed includes, but is not limited to: daily activity logs, Accident/Incident Reports, Safety Inspections, Unusual Occurrence Reports, and employee observations in the field.

Expansion projects capture hazards using a Preliminary Hazard Analysis (PHA) and an Operational Hazard Analysis (OHA). Identified hazards are managed in accordance with this document. Expansion projects capture security threats and vulnerabilities by conducting a Threat and Vulnerability Assessment (TVA). Threats and vulnerabilities identified will be managed in accordance with this document.

When a safety complaint is received via the Customer Assistance System (CAS), it is forwarded to the appropriate entity. The appropriate entity reviews the complaint and responds accordingly.

Collection of safety data for Vehicle Maintenance, Maintenance of Way, and Facilities Maintenance functions are obtained through Unusual Occurrence Reports and Accident/Incident Reports generated by that specific division. The responsible division maintains a detailed record of the incident and provides a copy to the Director, SSQA or designee.

As described in section 9, several reporting methods are available for employees and contractors to report safety concerns.

7.1.2 DATA ANALYSIS

Data related to day-to-day operations is captured on a variety of spreadsheets for tracking and trending and is discussed at SSC meetings and SSQA Business Review Meetings. Periodic summaries are also provided to the CEO and the Board. Data related to expansion projects is reviewed during project-specific meetings, including SSCRC meetings. The information is also discussed during the quarterly meetings between ADOT SSO and the SSQA team. More information is provided in Section 8.0.

7.2 SAFETY RISK ASSESSMENT

The Risk Assessment process consists of two components – Hazard Severity and Hazard Probability.

7.2.1 HAZARD SEVERITY

The appropriate Valley Metro committee assesses each potential hazard for its effects on employees, patrons, the general public, and/or Valley Metro. Hazard severity is a subjective measure of the worst possible mishap that could result from design inadequacies, personnel error, environmental conditions, or other procedural deficiencies for systems, subsystems, or component failure or malfunction. Identified potential hazards are categorized into one of four hazard severity levels adapted from MIL-STD-882E.

Severity categories are:

DESCRIPTION	CATEGORY	POTENTIAL CONSEQUENCE
Catastrophic	1	Fatality or multiple severe injuries; severe environmental damage; total system loss; extreme financial loss to Valley Metro
Critical	2	Severe injury or occupational illness; significant environmental, system or equipment damage; major service disruptions; significant financial loss to Valley Metro
Marginal	3	Minor injury or occupational illness; minor environmental, system or equipment damage; minor service disruptions
Negligible	4	Less than minor injury, environmental occupational illness, or less than minor system or equipment damage, or insignificant service disruptions

7.2.2 HAZARD PROBABILITY

The probability that a potential hazard will occur can be described in potential occurrences per unit of time, events, population items or activity. A qualitative hazard probability may be derived from research, analysis, and evaluation of safety data from the operating experience of Valley Metro or other similar transit systems.

Hazard probability categories are:

DESCRIPTION	LEVEL	SPECIFIC INDIVIDUAL ITEM	FLEET OR INVENTORY
Frequent	A	Likely to occur frequently	Continuously experienced
Reasonably 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 that it can be assumed occurrence may not be experienced	Unlikely to occur, but possible
Eliminated	F	Incapable of occurrence. This is used when potential hazards are eliminated.	Incapable of occurrence. This is used when potential hazards are eliminated.

7.2.3 RISK ASSESSMENT

The Risk Assessment process provides criteria to Valley Metro for determining the acceptability of assuming a risk associated with a hazard, the necessity of implementing corrective measures to eliminate or reduce the hazard, or a combination of both. Hazard risk assessment involves categorization of hazard severity and probability of occurrence. Each identified hazard is categorized by the Director, SSQA, or designee, and is assisted by the appropriate safety committee.

The risk associated with a hazard severity and probability of occurrence is based on the risk matrix below:

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			

HAZARD RISK INDEX	RISK	CRITERIA BY INDEX
1A, 1B, 1C, 2A, 2B	HIGH	Unacceptable
1D, 2C, 3A, 3B	SERIOUS	Undesirable – Management decision
1E, 2D, 2E, 3C, 3D, 3E, 4A, 4B	MEDIUM	Acceptable with review
4C, 4D, 4E	LOW	Acceptable without review

Different combinations of severity and probability pose varying risks to Valley Metro. Valley Metro management uses the risk assessment process to prioritize hazards and focus available resources on the most serious hazards requiring resolution while effectively managing the available resources.

- Unacceptable - hazards which present a risk that cannot be accepted because of severity and high probability of occurrence and requires elimination of the risk or control of the risk to an acceptable level. Corrective action plans are developed and submitted to ADOT SSO for review and approval. These corrective actions are then implemented.
- Undesirable - timely corrective action should be implemented, if possible, within fiscal constraints. Reduction of risk to the lowest practical level is accomplished in a variety of methods ranging from protective and warning devices to special procedures. This determination and the hazard resolution are tracked through the appropriate tracking log(s). For projects, this category requires SSCRC voting for system modification.
- Acceptable with review - Valley Metro's SSQA division and/or appropriate safety committee reviews the hazard to determine if the hazard can remain or whether a realistic mitigating measure can be implemented. This requires review by Chief Operations Officer and Director, SSQA, with input from the Chief Executive Officer.
- Acceptable without review - no additional review or action is required by Valley Metro's SSQA division and/or the appropriate safety committee.

7.2.4 UNACCEPTABLE HAZARDS

Valley Metro transmits (email, fax, hand deliver) a copy of the assessment to ADOT SSO within 24 hours or by 5:00pm on the next regular business day following the determination of a hazardous condition that is deemed unacceptable. These hazards are investigated by Valley Metro's SSQA division. Once Valley Metro determines the hazard has been identified as unacceptable, a corrective action plan (CAP) will be developed. The CAP will identify the hazard or deficiency, planned activities/actions to resolve the hazard/deficiency, the division(s) responsible for implementing the corrective actions, and a scheduled completion date for implementation. Unacceptable hazards are also tracked on the Hazard Tracking Log. Section 9.0 of Valley Metro's Accident / Incident Investigation Plan describes the investigation and reporting of unacceptable hazards.

The Hazard Tracking Log contains the following information:

- Valley Metro Hazard ID: a unique number assigned by the SSQA team
- HAZ Status: indicates if the line item is open, pending, or closed
- Reporting Source: indicates how the line item was generated, for example – an accident, an incident, an internal audit, an employee concern, etc.
- Reporting Person: the name (or reporting method if name unknown) of the person reporting the issue
- Date of Incident
- Time of Event
- Date of SSQA Notification
- SSO Notification – when SSQA notified SSO (if applicable)
- Location of the Hazard
- Hazard – a summary of the hazard
- Findings – a short narrative of the hazard
- Safety Risk Before Mitigation – using tables in this section
- Mitigations – a summary of mitigations
- File Name – a field where SSQA can add associated files/links related to the hazard
- Begin Mitigation Process Date
- Expected Mitigation Close Date
- Safety Risk After Mitigation
- Date ADOT Received Final Investigation Report
- Date of Monthly Status Notification – used if SSQA provides monthly updates to SSO

7.3 SAFETY RISK MITIGATION/RESOLUTION

Mitigation and resolution of hazards involves defining acceptance criteria for hazards. As described above, this acceptance criteria are based on the severity and probability of occurrence. The objectives of hazard mitigation/resolution are to:

- Identify areas where hazard mitigation/resolution requires a change in the system design or development of special procedures
- Verify hazards involving interfaces between two or more systems have been resolved
- Verify the mitigation/resolution of a hazard in one system does not create a new hazard in another system

7.3.1 MITIGATION/RESOLUTION REVIEW PROCESS

Each hazard reviewed is categorized by the Director, SSQA or designee in conjunction with maintenance, operations, engineering, design, or construction and assisted by the appropriate safety committee based on the nature of the hazard. The applicable committee determines to do one or more of the following to initiate mitigation/resolution of the hazard:

- Develop mitigating measures or a specific CAP for mitigation or elimination of the hazard and assessing responsibility for implementation
- Recommend a course of action to division or executive management for mitigation or elimination of the hazard
- Assign a subcommittee to research mitigation/resolution scenarios or alternatives and work with division management to implement
- Communicate the hazard or unsafe condition to the appropriate supervisor/manager for internal follow-up and resolution, including assuring the mitigations/resolutions effectively resolved the hazard and did not introduce any new, unintended hazards.

7.3.2 HAZARD RESOLUTION – ORDER OF PRECEDENCE

Several methods are used by Valley Metro to resolve identified hazards, including design changes, modification to construction or construction techniques, installation of controls and warning devices, training, and/or the implementation of special procedures. The hierarchy of hazard mitigation/elimination, from most effective to least effective is:

- Design to eliminate or to minimize hazard severity and/or probability. To the extent permitted by cost and practicality, identified hazards are eliminated or controlled by the design of equipment and facilities.
- Hazards that cannot reasonably be eliminated or controlled through design are controlled to the extent practicable and to an acceptable level of risk using fixed, automatic, or other protective safety design features or devices. Provisions are made for periodic functional checks of these safety devices.
- When design, construction, and safety devices cannot effectively eliminate or control an identified hazard, warning devices are used to the extent practicable. These devices detect the hazard and generate a warning signal to operating personnel and/or the public. Warning signals and their application are designed to minimize the probability of incorrect reaction to the signals.

Where it is impossible to reasonably eliminate or adequately control a hazard through design or the use of safety devices and warning devices, procedures and training are used to control the hazard. Cautionary language is standardized, and certain safety-critical tasks require personnel certification.

7.3.3. INFECTIOUS DISEASES

When possible, Valley Metro will develop strategies to minimize the exposure of infectious diseases to personnel and the public. Such strategies will be consistent with guidelines established by the Centers for Disease Control and Prevention and the Arizona Department of Health.

8.0 SAFETY ASSURANCE

8.1 SAFETY PERFORMANCE MONITORING AND MEASUREMENT

8.1.1 OVERVIEW

Valley Metro's SSQA division captures system wide performance measures through Safety and Security reporting, Incident Review Boards, and Safety and Security committee meetings. Reportable incidents are logged by the SSQA Division in the Hazard Tracking Log and/or the Accident/Incident Log. The Safety and Security Committee meets regularly to review incidents and to recommend Corrective Action Plans. Valley Metro also works through the Safety Security Committee to review trending in accidents, incidents, occurrences, and near misses to develop preventative action planning and/or to review the effectiveness of previous mitigations (if mitigations were implemented and a trend continues, this indicates the mitigations were not fully effective in resolving the trend).

ADOT SSO and Valley Metro's SSQA division hold a joint Quarterly Hazard Management Meeting. Topics of discussion include, but are not limited to, management plan review status, internal safety, and security audit status, staffing updates, accident/incident tracking log review, hazard tracking log review, CAP log review, and overall status updates for both organizations. As part of these quarterly meetings, Valley Metro transmits copies of the accident/incident tracking log and the hazard tracking log to ADOT SSO for review.

Additionally, Valley Metro assembles quarterly information for submission to its Board of Directors. This information contains Safety and Security metrics for the current fiscal year quarter, the previous quarter, and the previous fiscal year quarter.

8.1.2 REPORTS

A reporting process showing the rate for incidents and lost time for each month is developed and available for review by Valley Metro employees and ADOT SSO. Non-revenue service reporting is through the specific division manager and onto the Director, SSQA or designee. Revenue service-based incidents are reported through the Transportation Services Contractor to Operations and the Director, SSQA or designee.

Periodic reports are distributed to senior Valley Metro leaders by SSQA and the Transportation Services Contractor. Additional information, such as investigation reports, unusual occurrence reports, etc. are typically not included in the monthly summary report but are available for inclusion if needed.

Safety data is compiled by Valley Metro for a comprehensive report on the state of overall safety and for submission to, and in compliance with the National Transit Database.

8.1.3 ACCIDENT / INCIDENT REPORTING AND INVESTIGATIONS

8.1.3.1 Overview

Response to an investigation of accidents and incidents is detailed in the Valley Metro Accident/Incident Investigation Plan (AIP).

Prompt and thorough investigation and reporting of accidents is necessary to:

- Identify all the factors contributing to the cause of an accident while minimizing disruptions to revenue service
- Determine the appropriate corrective action to prevent the accident from reoccurring

- Satisfy requirements for investigation, notification, and corrective action of regulatory agencies
- Comply with ADOT SSO requirements
- Comply with Valley Metro procedures

Valley Metro Safety maintains an accident tracking log. The following information is included on the log:

- RTA Internal Tracking Number
- Date
- Time
- Mode
- Event Type
- Collision with
- Event Location
- Number of fatalities (passenger, patron, public, worker)
- Number of injuries (passenger, patron, public, worker)
- Estimated property damage
- Investigation conducted by
- Investigation report adopted by SSO?
- Probable cause
- Tow-away required?
- Description of the event
- CAP developed?
    - If yes, then CAP Source, CAP ID number, CAP identified actions, CAP approval by SSO, CAP proposed implementation date, CAP actual implementation date, CAP individual responsible for implementation, CAP department responsible for implementation, CAP status, CAP implementation verified, CAP status updates, CAP alternative summary
- ADOT received notification within two hours?
- Time of ADOT notification
- FTA received notification within two hours?
- Time of FTA notification
- Preliminary report date
- Status report date(s)
- Final report date
- ADOT approval status

8.1.3.2 Accident/Incident Reporting Criteria

The Director, SSQA or designee, is responsible for notifying ADOT SSO of safety and security events meeting the criteria established in the ADOT SSO standard. A copy of the most recent standard that details event reporting criteria is attached as Appendix A.

8.1.3.3 Accident/Incident Investigation Procedures

After receiving notification of an accident meeting the above criteria, Valley Metro will conduct an investigation concurrent with public safety personnel as defined by the ADOT crash reporting requirement. Valley Metro follows its AIP, which has been approved by ADOT SSO. In events involving accidents or incidents, the Valley Metro Operations personnel response requirements, along with the contractor's role, are included in the Rail Operations SOP 800.6.

Conducting investigations of accidents and incidents is part of the Hazard Management process. Follow-up and corrective action, as applicable, from these investigations are entered into the Accident/Incident tracking log and follow the Hazard Management process. Forms used to report incidents and accidents are found in the Valley Metro AIP.

Accident/Incident investigation along the alignment is the responsibility of the Director, SSQA or designee or the Transportation Services Contractor's Manager of Safety and Training, depending on the location, type, and severity of the accident. Accident/Incident investigation related to other activities (such as MOW, MOE, vehicle maintenance, etc.) is the responsibility of the Director, SSQA or designee and that specific division manager.

As part of the accident investigation, the training and safety records of the involved employee are reviewed by the specific division manager (for non-revenue related accidents) or the Transportation Services Contractor (for revenue related accidents). The specific division manager will have direct involvement in reviewing potential areas of improvement or omission. Regardless of the division involved, the Director, SSQA or designee is also responsible for all accident investigations.

8.1.3.4 Internal Notification Procedure (Revenue Service)

For revenue service operations, the OCC is responsible for making notifications of incidents to the Transportation Services Contractor's Management Team and Valley Metro's Security Dispatch Communications Center related to accidents and incidents on the revenue alignment. The Transportation Services Contractor's Management Team and Valley Metro's Security Dispatch Communications Center (DCC) contact Valley Metro's Management Team. The OCC team records entries in the Daily Activity Log for each incident and the Daily Activity Log is emailed to various divisions at Valley Metro. Examples of incidents that are included in the OCC Daily Activity Log include: collisions, derailments, any response by emergency services to Valley Metro (related to revenue alignment), delays greater than five minutes, and any other unusual occurrence that could attract attention by the community or media.

8.1.3.5 External Notification Procedure

8.1.3.5.1 Arizona Department of Transportation

For reportable revenue and non-revenue alignment accidents and incidents, the Director, SSQA or designee notifies ADOT SSO of Valley Metro safety and security events that meet the reporting criteria established in the ADOT SSO standard. Timeframes for the initial notification, preliminary report, and final report are also defined in the ADOT SSO standard. A copy of the most recent standard that details the criteria for event reporting, the timeframe for reports, and the information that must be included in the reports is attached as Appendix B.

8.1.3.5.2 National Transportation Safety Board

The National Transportation Safety Board (NTSB) is notified of any Valley Metro safety or security incident that meets their notification criteria. If the NTSB investigates, the Director, SSQA or designee is responsible for briefing ADOT SSO of the NTSB activities, including meetings, interviews, requests for data, functional testing, examinations of equipment, drug and alcohol tests, etc.

Reporting criteria, the timeframe for reporting, and the information that must be included in the report is defined by the NTSB. A copy of the most recent standard that details this information is included in Appendix C.

8.1.3.5.3 Federal Transit Administration

The Federal Transit Administration (FTA) is notified of any Valley Metro safety or security incident that meets their notification criteria.

Reporting criteria, the timeframe for reporting, and the information that must be included in the report is defined by the FTA. A copy of the most recent standard that details this information is included in Appendix D.

8.1.3.5.4 Accident/Incident Reporting and Documentation

Valley Metro will submit reports to ADOT SSO in accordance with the SSO program standard. A copy summary of the required reporting, including content of the reports, is included in Appendix B.

8.1.3.5.5 Corrective Action Resulting from Accident Investigation

When Valley Metro's investigations identify causal factors that require corrective actions, a CAP is developed and tracked on the Accident/Incident Log. This log identifies the division responsible for the action identified and a recommended time frame for implementation. Valley Metro Safety tracks all items through to completion.

8.1.3.5.6 Coordination with ADOT SSO

ADOT, as the Rail State Safety Oversight Agency, has designated Valley Metro as the primary investigator for Valley Metro accidents. This does not preclude ADOT from conducting their own independent investigation. Copies of all Valley Metro accident investigation reports and corrective action plans are provided to ADOT/SSO. Upon receipt of Valley Metro's final report, ADOT SSO conducts a review within thirty calendar days of receipt. Should the review take longer than thirty days, ADOT SSO will notify Valley Metro in writing on or before day 30 and provide a revised date for completion of the review. If ADOT SSO does not agree with Valley Metro's report, ADOT SSO will provide a written summary of area(s) of disagreement and the two groups will work together to reach a mutual agreement.

Should ADOT SSO choose to conduct an independent investigation, ADOT SSO will notify Valley Metro within seven calendar days following receipt of Valley Metro's initial report. Additional information on this process can be found in the ADOT Program Standard.

8.1.4 INTERNAL SAFETY AND SECURITY AUDIT PROGRAM PLAN

The purpose of Valley Metro's Internal Safety and Security Audit Program Plan (IAPP) is to provide a mechanism for determining the effectiveness of the ASP and SEPP and to assess the implementation level of the plans.

Valley Metro's Internal Safety and Security Audit Program Plan contains the following information:

- Details about the program, including who is permitted to conduct audits and how audits are conducted
- An outline of the audit process, including the development of checklists, notification to ADOT SSO, and associated reporting (including the generation of CAPs, if necessary)
- A list of the areas that are reviewed as part of the program
- A schedule for completing audits of identified areas within a three-year period

The IAPP also describes the annual report summarizing the year's internal audit results and formal letter of certification signed by the CEO/Accountable Executive that Valley Metro must provide to SSO by January 31st of each year and includes information on how ADOT SSO can provide feedback and/or request more information from Valley Metro (per the ADOT SSO Program Standard).

8.1.5 SYSTEM AND FACILITIES INSPECTIONS

Examples of Valley Metro rail system facilities and equipment that are subject to inspection include, but are not limited to: stations, rail vehicles, traction power substations, signal bungalows, bridges, park-and-

ride lots, security kiosks, operator break rooms at the end of line stations, and all facilities in the OMC complex.

Specifics for inspection checklists and inspection frequencies are based on manufacturer supplied manuals and industry standards and include the respective manufacturer maintenance manual(s). Should manufacturer information not be available, Valley Metro will provide the standard based on best industry practices. The experiences of both employees and Valley Metro as an agency may also contribute to the content of inspection checklists and the frequencies of inspections.

Buildings and related equipment to the buildings, such as eye wash stations, first aid kits, general housekeeping issues, etc., are subject to an ongoing inspection to ensure the overall cleanliness and safety of the areas being inspected. This approach also includes rigging and equipment that may be used in the day-to-day activities of workers who reside at any of the buildings located within the OMC campus area.

Inspection of track and structures located along the wayside are made in accordance with industry accepted track maintenance standards and are conducted on the recommended schedule. Track inspections include, as a minimum, the following:

- Walking inspection by track walkers
- Riding inspection by track inspectors
- Gauge and cross level, and other pertinent geometry measurements
- Routine structures inspections including trackways, bridges, and structures

Rail vehicle inspections are made in accordance with manufacturer's recommendations and industry-accepted practices including:

- Periodic inspections specified by component supplier manuals
- Walk-around inspection checklist
- Visual inspection by the operator

Inspection and test of train control, communications, traction power, and other miscellaneous equipment are conducted as required by industry practice or manufacturer's recommendations. The industrial safety plans for all Valley Metro facilities, including those located at the OMC Campus include, but are not limited to;

- The process used for facilities and equipment safety inspections
- Identification of facilities and equipment subject to regular safety related-inspection and testing
- Techniques used to conduct inspections and testing
- Inspection schedules and procedures

Valley Metro's Facilities and Maintenance Supervisors and the Safety Division are responsible for the industrial safety plans for their respective facilities.

Safety inspections of Valley Metro facilities are conducted by supervisory personnel and Valley Metro's SSQA division to detect and eliminate potential hazards, to ensure the safety of passengers using Valley Metro facilities, to ensure employee safety, and to ensure compliance with regulations. Checklists are used to ensure uniformity of inspections. Completed checklists are maintained by the division that conducted the inspection as a record of compliance with the safety criteria. These records are subject to audits to verify compliance. Open items found during the inspections are assigned to specific personnel to close the item. Pictures and other supporting documentation often accompany the item, which is tracked, by number, until closed. Persons responsible for correcting (closing) a specific item are assigned a timeline based on the severity of the infraction. An inspection report is issued to the responsible division

listing safety and health hazards found during the inspection. All identified hazards not easily correctable are entered into the hazard resolution process and tracked for review and disposition via the SSC.

8.1.6 MAINTENANCE/INSPECTIONS

Although similar in nature and approach to the section above, the specific requirements of this section relate to maintenance inspections of physical equipment along the guideway (wayside) or located at the OMC campus. The requirements ensure the equipment performs as originally designed and is safe to operate on a day-to-day basis.

Examples of these inspections relate to manufacturer requirements for inspection of a specific item (LRV trucks, radio performance testing, etc.) or scheduled preventative maintenance (PM) activities as called out by the manufacturer. Examples of areas subject to PM or other inspection include, but are not limited to; stations, rail vehicles, traction power substations, signal bungalows, bridges, park-and-ride lots, security kiosks, operator break rooms at the end of line stations, and all facilities in the OMC complex.

Inspections and PM procedures are conducted to comply with all manuals and instructions provided by manufacturers or providers of the equipment being maintained or inspected. In the event more stringent PM or other maintenance is required (based on existing systems operation, employee experiences, and/or observation of other systems), nationwide, best industry practices shall be used as deemed necessary by the specific division manager to ensure the best possible PM, repair, and safety outcome. Such practices shall be documented in accordance with Valley Metro procedures.

Detailed PM procedures and checklists are included in the applicable system and manufacturer maintenance manual. Inspections and PM activities are typically conducted by the Valley Metro technician responsible for such activities or operational system and are then forwarded to the supervisory personnel familiar with the equipment or work processes being inspected or undergoing PM.

In the event a safety issue is discovered during the performance of the PM or related inspection, the specific issue is addressed and repaired within the PM. If the repair cannot be performed, the item is transferred to the inspection log designed for such use.

Timelines associated with the repair or mitigation of safety issues are tracked through to completion. Safety issues that have a significant impact on either passenger or employee safety that cannot be addressed during the designated PM time frame are immediately relayed to Director, SSQA in written form.

Safety audits of PMs and other related inspections include but are not limited to: identification of affected facilities and equipment, maintenance cycles, documentation review, and integration of identified issues into the hazard management process. The division manager shall make available to the auditor the actual PM or inspection procedure, if requested. The division manager shall keep previous revisions of the inspection or PM procedure as an active record and to show evolution (if any) of the process for that specific system. All PM/Maintenance procedures shall be recorded and stored in the workorder system.

8.1.7 TRANSIT ASSET MANAGEMENT PLAN (TAMP)

Transit asset management (TAM) is a strategic business practice intended to support transit agencies with maintaining their assets in a state of good repair. To reduce the future costs of repairs and replacement of transit capital assets, the Federal Transit Administration has made asset management a high priority as part of an effort from the Moving Ahead for Progress in the 21st Century Act (MAP-21). The FTA TAM final rule defines an asset inventory as a register of capital assets. The inventory must include the quantity and type of all capital assets that a transit provider owns, except for non-vehicle equipment values at less than $50,000. In addition, the inventory includes any rolling stock, guideway infrastructure, and maintenance,

passenger, or administrative facilities that are owned by third-party contractors and used by transit agencies.

Valley Metro has developed a Transit Asset Management Plan to meet the Federal TAM requirements of a Tier I transit provider. The TAMP includes an inventory of capital assets, an assessment of asset condition, and the processes and tools that support investment prioritization. Additionally, the TAMP states Valley Metro's TAM and State of Good Repair policy, outlines the implementation strategy, assigns key activities, summarizes resources, and includes an evaluation plan for continual improvement. If an asset is rated a 2 or lower by a condition assessment, the TAMP Manager will notify the Safety team. Safety will meet with the appropriate division(s) to identify and resolve potential hazards associated with substandard or failed conditions. This document is signed by the Accountable Executive.

There are two groups of subject matter experts that support the Asset Management Program Manager. The Asset Management Technical Team includes representatives from each operating division who engage in lifecycle asset management planning. The second group of subject matter experts is the Asset Management Working Group. This working group is comprised of representatives from diverse areas throughout the Agency, including marketing, bus and rail transportation, finance, and accounting, and SSQA. One of the main purposes of the Working Group is to assist in implementing new or updated strategies, objectives, plans, schedules, processes, procedures, etc.

Valley Metro uses several tools to support investment prioritization. From budgeting to programming project needs, to changing and/or expanding services, to managing assets, there are processes used for decision-making; these processes do not necessarily require the use of specialized software. Section 4 of the TAMP provides additional information on these various decision support tools.

In accordance with the TAM final rule, Valley Metro will periodically review and revise the TAMP to ensure that is continues to align with the Agency's strategic goals, complies with FTA requirements and, most importantly, improves the safety and reliability of Valley Metro's assets. Valley Metro will set performance targets for the following fiscal year each July and will update the TAMP each year that inventory changes. Additionally, Valley Metro will update the entire TAMP at least once every four years in accordance with the FTA mandate.

8.2 MANAGEMENT OF CHANGE

8.2.1 CONFIGURATION MANAGEMENT

Configuration management is the process which ensures, to the maximum extent possible, that all changes to property, equipment, system design elements, etc., are reviewed and documented as to configuration, accuracy, and completeness. Procedures for changes during extensions and major capital projects are outlined in the Capital Development Change Process Manual and Procedures (Aconex #VM-PC-MAN-00001) and are not addressed within the section. These changes related to capital construction projects are a function of ongoing construction and design efforts linked solely to new construction not tied into the existing alignment which would be considered as operational at that time. As documents or procedures are revised and implemented, the revision and date of the revision will be included in the revision tracking log as well as the footer of the revised document. Notifications to staff responsible for the actual work being performed, will then be provided the revision (e.g., SOP) of the document with the notification the revision supersedes the previous. This is handled via formal notification regarding the update to the affected managers and places the update for review and implementation in the local drive. The updates are recorded with revised dates and review, sign off by Managers and Directors/Chief.

Configuration management for changes to, and modification of, the existing alignment, or the certification of a capital project which has reached the substantial completion phase are the focus and intent of this section, as detailed below.

Procedures for changes to the design and/or operation of the Valley Metro system are described by SOP 100.9, Rail Change Review Committee (RCRC).

8.2.2 PROCESS FOR CHANGE

Valley Metro managers and directors who are responsible for the safety and security, engineering, maintenance, or day-to-day operations of Valley Metro comprise the RCRC and are responsible for the development of, and review of proposed changes to:

- The installation of new or modification of existing equipment, facilities, systems, communications, software, or databases affecting the safety of rail operations on the tracks, in the operations facilities and on the premises of the Valley Metro rail system, including the LRV maintenance yard – Less than $99 million.
- Design and installation of new equipment improvements or expansions or rail vehicles (not replacement of failed equipment)
- Rail training programs (operations and maintenance).
- Rail Operations Standard Operating Procedures
- Changes or upgrades to the SCADA programs or database
- Rail Transportation Rulebook
- Rail Employee Maintenance Manuals
- Evaluate recommendations from the SSC

8.2.3 AUTHORITY FOR CHANGE

No change is implemented without the review and approval of the RCRC. Each committee member is responsible for identifying and bringing proposed rail system changes in their respective responsible area of the Rail division (e.g., the Deputy Director of Maintenance or designee is responsible to assure RCRC review of configuration changes to the rail vehicles.)

The RCRC shall convene on an as needed basis and in accordance with the conditions as detailed above. Written records shall be kept by the committee chair and the respective area influenced by the RCRC's final decision. SSQA must be notified of any RCRC meeting with sufficient notice and shall approve all safety and security related issues that may arise from the proposed changes, modifications, etc. prior to work start.

8.2.4 SAFETY AND SECURITY CERTIFICATION PROGRAM

8.2.4.1 Overview

Specific parameters and requirements of the certification and management plans for a specific capital project are found in the project-specific Safety and Security Management Plans and Safety and Security Certification Plans. This plan provides an overview over the program and processes utilized but is not meant to be all inclusive.

Valley Metro conducts a thorough and systematic Safety Security Certification Plan for projects over $99M and with extended scope. This does not include work associated with a system modification (work being done on operational system of limited scope and below $99M). This process complies with FTA CFR Part 674 and is managed by the Director, SSQA. Examples of tasks covered by this plan include new rail systems and extensions, acquisition and integration of new rail vehicles, acquisition and integration of new safety and security critical technologies into existing service, and major safety and security critical redesign

projects. The Safety and Security Certification Program provides a framework to verify that all critical safety and security elements are satisfactorily completed prior to entering revenue service.

Certification is also required for projects that are defined as functionally similar replacements, as outlined in section 8.2.2. The Program includes all phases of a project, including design, construction, testing, and modifications to existing facilities. System modifications less than $99 million will be certified through the Rail Change Review Committee (RCRC) section 8.1. In addition, Valley Metro provides a Capital Improvement Project (CIP) Log that will be updated and sent to State Safety Oversight Agency (ADOT) according to the current SSOA Standard. The CIP log will be updated and transmitted to ADOT by the Program Manager, Safety Security, or designee when there is a material change in a CIP or a new project begins.

8.2.4.2 Safety and Security Certification Plans

Valley Metro develops a specific Safety and Security Certification Plan (SSCP) for each project requiring certification as described above. Each SSCP addresses applicable safety and security critical elements comprising the associated project.

Some of the systems addressed for certification plans are: facilities, design, construction, testing, contractual training, emergency response training and drills, operating and maintenance manuals, training of operations and maintenance personnel, and operating rules and procedures. Each SSCP defines the implementation of the associated Safety and Security Certification Program, which documents:

- Safety-related design criteria and requirements are included in contracts, plans, specifications and drawings, and in-turn, incorporated into the final product and implemented in the field
- Tests are conducted to verify the ability of the systems and equipment to function safely as designed
- Plans, procedures, maintenance manuals, and training programs are developed and implemented prior to the start of revenue service
- Responsible Valley Metro personnel verify that the safety and security certifiable elements are completed

8.2.4.3 Implementation of the Safety and Security Certification Program

Each project Safety and Security Certification Program is managed by the Director, SSQA, or designee, and the SSCRC. Tasks for each project include:

- Preparing project specific SSCP
- Issuing the Safety and Security Management Plan (SSMP), which directs field personnel on how the Certification Plan is to be administered
- On-site training of all contract and Valley Metro personnel for the SSCP, Safety Security Certification Verification Report (SSCVR) and Quality Management
- Notifying via formal memo from the Director of Capital Development to the Director, SSQA indicating the date of transition into engineering for each capital improvement project. The Director, SSQA signs the memo, returns it to Capital Development, where it is uploaded into Valley Metro's document management system, Aconex.
- Supporting Safety and Security Certification activities
- Conducting scheduled and unscheduled audits of the certification and management processes prior to final SSCVR reporting
- Incorporating necessary verbiage into contracts prior to construction start

- Preparing of design criteria checklists, verification of items on the design checklists, specification conformance checklists, and verification of items on the specification conformance checklists
- Performing tests and analyses resulting from the Safety and Security Certification Program
- Verifying successful contractual tests and successful completion of integrated tests
- Participating in technical and design reviews and presentations to regulatory-agency personnel and SSQA
- Evaluating any deviations impacting safety or security and submitting for review and acceptance by the Director, SSQA and COO using a Design Deviation Review form produced by the Capital Development Division
- Completing certificates for certifiable elements
- Preparing the Safety and Security Certification Verification Report for design, construction, integrated tests, contractor provided training and maintenance manuals; and input on training for operations, and emergency services personnel; test rules and procedures; and operating rules and procedures
- Issuing Certificates of Compliance for individual certifiable elements, and a Project Certificate of System Safety & Security as verification materials warrant
- Incorporating all final sign-off and corrected red-line drawings into the Valley Metro centralized database, along with the requisite certification sheets and other proof of compliance

8.2.4.4 Safety and Security Verification Reports

For each project certification program, the Director, SSQA or designee generates periodic status reports regarding safety and security certification activities. These reports are distributed to the SSCRC and Valley Metro management and contain the following information: status of the Safety and Security Certification Program, status of safety critical items, status of security critical items, updates to safety open items, updates to open security items, certificates completed and in progress, and any other problems and outstanding issues.

The final documentation of a project Safety and Security Certification Program is contained in the corresponding Safety and Security Certification Verification Report (SSCVR). The System Safety Management Plan (SSMP) identifies the program for adherence to the requirement for review of design exceptions that impact safety and security certifiable items as well as any management of deviations and milestone reviews by SSQA.

The SSCVR describes the project specific Safety and Security Certification results; includes safety and security certificates for each certifiable element, as designated in the construction and design specific SSCP for that project; and states that the project or equipment is ready for revenue service, including workarounds for elements that may not be completed. The SSCVR provides documentation that all safety and security critical subsystems, integrated testing, emergency response training drills, safety, and security related contract deliverables, operating and maintenance procedures, and contractual training programs and all other items detailed in the SSCP are reviewed for compliance with Valley Metro safety and security requirements and completed prior to the project or equipment into revenue service.

The Program Manager, Safety and Security prepares a draft SSCVR for review by the SSCRC once all identified safety and security design and construction elements are completed, per the SSCP and SSMP. Upon SSCRC approval, the SSCVR is officially submitted to the CEO for approval and transmitted to the ADOT SSO point-of-contact.

Should any elements remain open at revenue service, they are detailed in the certificate generated at the time of revenue service. These elements do not pose a significant safety or security hazard to Valley Metro

employees and/or contractors or the public. Timelines for closing these open items are attached to the certificate.

8.2.5 SYSTEM MODIFICATIONS

Valley Metro rail system modifications are the responsibility of the Valley Metro Operations Division, with oversight by the SSQA Division. A database, is maintained for all modifications, and appropriate notations are made on drawings, schematics, manuals, etc. The SSQA SharePoint/ G Drive may be used as an additional system of record.

System modification is defined as any change to Valley Metro that the SSQA Director deems not to require implementation of a Safety and Security Certification Program, including equipment, facilities, and items less than $99 million and limited scope. The system modification process is applicable to new procurement, as-built drawings or schematics, training, operational rules, manuals, etc.

SSQA is required to be involved in project design and construction which impact safety, security, and operations. The SSQA Director and the COO, in cooperation with Director Capital Development (if necessary), will work to identify modifications to the system and determine an agency lead from SSQA and Operations. In most cases, the Safety Specialist will be the safety liaison and responsible along with the Safety Manager, to determine if the scope of the work and budget amount meets the threshold of the System Modification process per this section.

- The Director SSQA or designee, will provide a summary of the project to the SSO/ADOT of how the project complies with a System Modification and not as certification via SSCVR process. Every effort will be made to provide this notification at the transition to engineering. The SSO may provide input, support, and recommendations, if necessary.
- The Rail Change Review Committee (RCRC) will then be convened by the COO (SOP 100.09).
- Participation in the RCRC is required by the Safety Specialist and the Manager, Transit Safety. ADOT SSO may also participate.
- The Safety Specialist and project manager will author a project report and identify any hazards/mitigations and enhancements to the existing system with the modification.
- The report will be reviewed by the COO and Director SSQA for comment and acceptance. The report will include a Configuration Change Request Form (SOP 100.09 RCRC).

As part of the determination process for proposed system modifications, the Safety Specialist and project manager prepare the following for review and approval by the Director, SSQA and the appropriate safety committee:

- Project Description: A concise written description and rationale for the proposed project or modification. This includes technical details or graphics, as appropriate, to illustrate the function or purpose of the project.
- Hazard Identification: Identify potential hazards associated with the system modification, paying specific attention to its compatibility with existing system(s) and/or procedures. This includes mitigation plans for identified hazards. System enhancements are also described in this section.
- Training and Documentation Plan: Prepare plans for training and qualification of employees as required.

For system-wide modifications to safety-critical equipment, such as switch machines, Valley Metro may include the system modification activities on the Valley Metro Corrective Action Monitoring Log.

Upon the discretion of the Director, SSQA, additional steps beyond the system modification process outlined above may be required.

8.2.6 CHANGES RELATED TO ORGANIZATIONAL STRUCTURE / ACTIVITIES

Valley Metro's organizational structure and proposed changes to the organizational structure are reviewed by the Leadership Team.

As described throughout this document, the effects of changes in organizational structure, training, and other people-related changes are monitored as part of ongoing safety assurances, accident / incident / near miss investigations, employee safety concerns reporting, and routine safety-related meetings.

8.3 CONTINUOUS IMPROVEMENT

Valley Metro assesses its safety performance in a variety of ways. As outlined above, data is collected from several sources, reviewed by the safety team and other applicable personnel, and is discussed at various meetings. Additionally, Valley Metro has established its performance targets for CY2023 and will be tracking performance monthly. Performance measures and targets will be reviewed and updated as part of the annual review of this document.

Valley Metro's ISSA Program outlines how the safety and security program is reviewed on a continual basis. ADOT SSO is invited to attend and observe these audits and a summary report of audit activities is sent to ADOT SSO by Valley Metro's SSQA division. Additionally, Valley Metro is subject to a triennial audit by ADOT SSO. As outlined in section 8.1.4, corrective actions plans are created to address findings from both internal and external audits.

9.0 SAFETY PROMOTION

9.1 SAFETY COMMUNICATION

9.1.1 EMPLOYEE SAFETY REPORTING SYSTEM

In addition to reaching out directly to managers, supervisors, and Valley Metro's Safety team, the agency provides several other processes for employees and contractors to report safety concerns.

- Emailing VMSafetyConcerns@ValleyMetro.org. The distribution list for this email address is Valley Metro's Safety team.
- Calling (833) 232-SAFE (7233), which allows for the caller to remain anonymous, if desired. This phone number is staffed by a non-SSQA Valley Metro team member 24 x 7. The content of these calls is then provided to Valley Metro's Safety team via email. The Safety team is immediately contacted by phone if the concern needs immediate resolution.
- Completing a form on the VM safety reporting portal located at http://safe.valleymetro.org, allows for the individual to remain anonymous, if desired. The completed forms are emailed to Valley Metro's Safety team for follow-up. The website clearly indicates critical safety concerns should be called into the phone number above for immediate attention.
- Filling out a comment card. These cards are available in break rooms throughout the agency. Cards with safety-related comments are forwarded to the Safety team.

A member of Valley Metro's Safety team responds to each concern and tracks them on a spreadsheet to ensure follow through. If the individual reporting the safety concern provides a phone number and/or email address, a member of Valley Metro's Safety team will contact the individual to provide feedback on the concern (e.g., actions that were immediately taken, a timeframe for resolution, and/or asking the individual if the actions taken fully addressed the concern). If the individual reports anonymously, Valley Metro Safety indicates "anonymous" on the tracking spreadsheet. A summary is provided during the Safety and Security Committee meetings.

The employee safety reporting system has been shared with employees and contractors in a variety of ways. Communication tactics included mass emails, posters in employee common areas, magnets in high visibility areas throughout the agency (refrigerators, ice machines, door frames, near timeclocks), and messages on monitors across the agency. The Safety team will continue to work with Marketing on new communication strategies related to employee safety reporting (e.g., new posters/magnets or business cards).

In accordance with Valley Metro's Anti-Discrimination, Harassment & Retaliation Policy & Complaint Procedure, Valley Metro does not tolerate retaliation against anyone asking questions or who is raising or reporting concerns in good faith. Our employees should always feel comfortable coming forward or immediately reporting concerns through one of the reporting channels. Deliberate or egregious safety violations will not be tolerated and will be subject to progressive disciplinary action.

9.1.2 COMMUNICATION OF SAFETY-RELATED MESSAGES TO THE AGENCY

Valley Metro uses a variety of processes to share safety-related messages throughout the organization. As previously described, document revisions are transmitted to division directors to share with their teams. The SSQA Director also emails a variety of information throughout the agency, including safety

and security tips/messages (related to specific times of the year, holidays, etc.). SSQA has a division-specific page on the intranet with information that is updated on a periodic basis.

Information about the employee reporting system was rolled out using a variety of methods, including emails, posters, and magnets. New communications materials will be rolled out on a periodic basis to ensure the message is continuously shared.

9.2 COMPETENCIES AND TRAINING

It is Valley Metro's policy that all employees working on the Valley Metro rail system are properly trained and qualified to perform the duties to which they are assigned prior to performing those duties. Verifications of such qualification are conducted through internal audits of training programs, documentation, and interview of trained personnel.

Specific "construction based" safety and security training is not addressed in this section. Construction safety and security training related to capital projects is the responsibility of the Valley Metro Capital Development Division; however, all construction personnel retained by Valley Metro shall attend and remain current in the training as detailed below. It is the responsibility of the Capital Development Project Manager to ensure training on their project(s) remains current. Construction based safety and security work for current and future capital projects are evaluated on a project specific basis and such procedures and documentation shall be in accordance with Valley Metro Safety and Security approval, prior to work start.

9.2.1 RULES COMPLIANCE / PROCEDURE REVIEW

9.2.1.1 Overview

Valley Metro rail operations are governed by Standard Operating Procedures and the Valley Metro Transportation Rulebook. Operating rules and procedures provide specific directives for conducting rail transit operations and maintenance procedures to identify the maintenance requirements for the complete system.

9.2.1.2 Review of Rules and Procedures

The Valley Metro Operations Division is responsible for periodic reviews of the Standard Operating Procedures and Transportation Rulebook. The Transportation Rulebook is reviewed on an annual basis by a Committee assembled for that purpose. Per SOP 100.01, SOPs are reviewed annually by the applicable discipline associated with the SOP. Immediate need for rule changes are handled by Special Orders and the immediate need for procedural changes is handled by Transportation Bulletins. These serve as temporary rules and procedures until the rule or procedure is revised.

9.2.1.3 Process for Ensuring Rules Compliance

Achieving successful compliance with rules and procedures is facilitated through:

- Training of all personnel with regards to rules and procedures
- Managers and supervisors setting positive examples for employees
- Requiring that all staff under a specific managers direction know and follow applicable rules and procedures
- Immediate and consistent disciplinary action to ensure that employees follow established rules and procedures. Likewise, immediate and consistent praise to ensure employees are recognized for demonstrating adherence to the rules and procedures
- Identifying the resources necessary to follow applicable rules and procedures, and ensuring that such resources are available to all employees and contractors

- Establishing methods of recognition that provide further incentives for demonstrating compliance with rules and procedures.
- Valley Metro's Internal Safety and Security Audit Program Plan

9.2.1.4 Compliance Techniques

Valley Metro rules compliance is conducted to determine the knowledge and application of operating rules and procedures. Operations is responsible for assuring implementation, development, managing changes as well as providing direct oversite compliance with day-to-day activities to determine effectiveness. Compliance is monitored, verified, and enforced through direct supervision and observation of skills, as well as competency testing, both on the job and through structured classroom setting.

Day-to-day compliance with established rules and procedures is the responsibility of all managers and supervisors and they are held accountable for the safety performance of their staff through periodic reviews. Periodic audits of supervisory personnel for compliance with rules and procedures are conducted by the Director, SSQA or designee, the Transportation Services Contractor Manager of Safety and Training, and Valley Metro's operations and maintenance managers/directors. All audit results, regardless of auditing mechanism, are reviewed by the Valley Metro Director, SSQA.

Valley Metro's Director, SSQA or designee monitors these activities for effectiveness and audits this element as part of the Valley Metro Internal Safety and Security Audit Program. Specific divisions responsible for this auditable element are found in the ISSA audit matrix.

9.2.1.5 Documentation

Records of rules compliance checks are maintained by the Transportation Services Contractor and Valley Metro and are reviewed periodically, but not less than annually, by the Director, SSQA or designee. Any potential hazards identified are tracked through resolution and violations are monitored for improvement through follow-up checks.

9.2.2 EMPLOYEE SAFETY PROGRAM (DIRECT AND CONTRACTOR)

Valley Metro's Employee Safety Program is described in the Employee Safety Program Plan and Procedures (SOP 1500 series). The Transportation Services Contractor and all other contractors working with Valley Metro have established safety rules and programs to maintain a safe work environment for their employees. These contractor rules and programs are at least as stringent as the requirements outlined in Valley Metro's Employee Safety Program Plan and Procedures (SOP 1500 series) and apply to all employees working directly for Valley Metro, the Transportation Services Contractor, or any other contractor, regardless of purpose, who may come to be employed by Valley Metro.

Contractors' employee safety standards are auditable by Valley Metro as part of contract compliance reviews and both contractor and Valley Metro safety plans are auditable as part of the Internal Safety and Security Audit Program. Elements of the employee safety programs include but not be limited to; Right-to-Know programs, the hazard identification and resolution process, worker protection and safety, industrial hygiene programs, hazardous materials control, personal protective equipment, and general workplace safety. Contractors working directly on capital projects not yet tied into the revenue or maintenance alignment are also subject to these provisions and each contractor, through Valley Metro's Director, Capital Development, shall ensure compliance to this auditable element.

All Valley Metro contractors, including the Transportation Services Contractor, and all direct Valley Metro employees must provide and receive initial personal safety training as well as job-specific, technical training. These training procedures must be approved by the Director, SSQA (if related to safety and/or

security) and the applicable division manager prior to implementation by the specific contractor or direct employee division manager.

All managers, regardless of affiliation with rail operations, must provide supplemental and refresher training for repetitive, new, or revised tasks, technologies, territory, or equipment while under the direct supervision of any Valley Metro division tied to any aspect of revenue or maintenance service. The need for training recertification depends on the safety critical nature of the job and any re-certifiable applicable skills as required by Valley Metro and/or the equipment/system manufacturer. Additional safety meetings and safety procedures may be implemented by contractors directly involved in capital construction projects not yet tied to the revenue alignment. “Toolbox talks” and other safety meetings fall outside the intent of this section and are specific to ongoing capital projects work.

All safety information and materials are provided and made available to operations, LRV maintenance, facilities maintenance personnel, and other contractors as needed. Postings at remote job locations, offices, and other work areas shall clearly show the requirements discussed in this section.

In addition to its own safety standards, Valley Metro requires the coordination and cooperation with a variety of Federal, State, and local agencies to ensure the safety of the system. Examples of these agencies include, but are not limited to:

- Arizona Department of Transportation (ADOT/Rail State Safety Oversight)
- Federal Transit Administration
- Occupational Safety & Health Administration / Arizona Division of Occupational Safety & Health
- Local fire / rescue divisions
- Local police divisions
- Transportation Security Administration, Surface Transportation Inspectors
- Local emergency management agencies
- Utility companies
- Medical facilities

The Director, SSQA is the governing authority to ensure and establish compliance with the standards in this section.

9.2.3 TRANSPORTATION SERVICES CONTRACTOR

Transportation Services Contractor Operations Supervisors are trained in and qualified on the operating and safety rules, other applicable regulations, the characteristics of the Valley Metro rail system, and the standard operating procedures applicable to the various aspects of the operation of the Valley Metro rail system, including the operation of the rail vehicles. In addition, the OCC function requires training and qualification in the dispatching of trains, timetable management, and special instructions, the standard operating procedures, and the operating characteristic of the rail vehicles.

Transportation Services Contractor rail Operators are trained and qualified on the operating and safety rules, timetable and special instructions, standard operating procedures, characteristics of the Valley Metro rail system, and inspection and operation of the l rail vehicles during initial training. This training also includes a Transportation Services Contractor light rail Operator Certification Program specifically tailored to the needs of the Valley Metro rail system. Transportation Services Contractor rail Operators are required to undergo annual recertification training.

9.2.4 OUTSIDE CONTRACTOR TRAINING

All safety-related elements of initial training involving new equipment and facilities are part of the safety and security certification process. Contractors support training by providing necessary systems and equipment documents that relate to training, such as operations, safety, and maintenance manuals.

The manuals and procedures provided by the contractor or sub-tier contractor are reviewed by the applicable Valley Metro division manager and SSQA prior to authorization to proceed with the work as detailed in the contract. Copies of the procedures shall remain with the applicable Valley Division manager and SSQA. Additional copies of these procedures may reside with the Valley Metro procurement division, should such activities be tied to pay-for-performance goals, or liquidated damages (LD) provisions as may be held within the contract documents. The decision to generate such documentation to the procurement division shall fall to the Valley Metro division manager authorizing the contractor to perform the work.

A Track Access Training program for all contractors and other, Valley Metro and non-Valley Metro employees who may or will have access to any part of the alignment or associated wayside work is provided by Transportation Services Contractor as outlined in the section below.

9.2.5 WORKING ON/NEAR VALLEY METRO RAIL PROPERTY (TRACK ACCESS TRAINING)

A Track Access Training program is available and is offered on a recurring basis. The training program is conducted by Transportation Services Contractor or a trained Valley Metro designee. Any Valley Metro employee or contractor who works on or near the rail system guideway must have completed the Track Access Training and either display a special numbered sticker on their hard hat or have a Valley Metro issued track access ID card. Track Access Training credentials are valid for twenty-four months.

All personnel attending the Track Access Course are required to sign-in as a record of attending the class. Records are maintained by Transportation Services Contractor in a secured location and are available for audit on an as needed basis.

Operations and Maintenance Agreements with all jurisdictions establish the rules and responsibilities of city employees who work in proximity to the Valley Metro guideway and facilities in the performance of their duties.

9.2.6 DRUG AND ALCOHOL ABUSE PROGRAM

Valley Metro has established and implemented a Drug and Alcohol Program in accordance with the Federal Transit Administration (FTA) and the U.S. Department of Transportation (DOT) regulations for Drug and Alcohol Testing of safety-sensitive employees.

Valley Metro, the Transportation Services Contractor, and all other contractors either working for Valley Metro or as a sub-tier to a contractor for Valley Metro are responsible for implementation and management of their respective drug and alcohol programs for all safety sensitive personnel (as defined by FTA) whom they employ.

Should these policies be found to be less strict than the Valley Metro standard, the Valley Metro standard shall govern Division managers that employ contractors, consultants and others are required to notify the contractor, consultant or other, in writing of this policy prior to contract execution, review by Procurement and subsequent work start. In any case where suspected drug and alcohol abuse has occurred, the Director, Human Resources shall be notified immediately.

The Transportation Services Contractor has an Anti-Drug and Alcohol Policy that is applicable to the Transportation Services Contractor employees. This program, at a minimum includes pre-employment, post-accident, random, and reasonable suspicion testing. Copies of this program reside with the Valley Metro Rail Operations Manager, Valley Metro Safety and Security, and the Transportation Services Contractor on-site project manager. The City of Phoenix Transit Department (as the FTA grant recipient) and Valley Metro periodically audit the Transportation Services Contractor's program for compliance with

FTA regulations. Audit of all other programs are the direct responsibility of the specific division manager and the safety and security division.

9.2.7 TRAINING REQUIREMENTS

Valley Metro employees and contracted staff attend a new employee orientation. The SSQA division leads a Safety and Security presentation as part of the orientation program. Topics discussed include ASP/SMS, employee reporting system for safety concerns, and emergency preparedness. Additional training is provided to affected staff members as outlined in the Employee Safety Program Plan (SOP 1500 series).

Valley Metro OMC employees are trained and qualified on the maintenance of way rules and on relevant portions of the operating rules, timetable and special instructions, safety rules, and standard operating procedures. The table below and SOP 100.16 (Valley Metro OMC Training Plan) provide an overview of the safety training provided to safety-sensitive staff working at the OMC.

- **Level I training:** General Track Access Training applicable to internal or external entities requiring routine work/entry or an understanding of operations on or near the guideway.
- **Level II training:** Those employees who will, as a regular part of their duties, work in the active guideway in high hazard activity and/or work with tools, equipment, or chemicals
- **Level III training:** Those employees actively entering and working in or around "Authorized Entry/Access Only" type locations, such as TPSS, OCS, or in Lock out Tag out (LOTO) type activities. Level III training is designed to restrict access to high hazard locations to ONLY those employees specifically trained in the entry, access, and capabilities of such facilities or asset.

POSITIONS REQUIRING TRAINING AND CERTIFICATION	FREQUENCY OF TRAINING AND RECERTIFICATION		ORGANIZATION PROVIDING TRAINING
	Upon Hiring	**Recertification**	
Operations Supervisors ***Operations Controllers***	Initial Training and Certification Level I	Annually Annually	Transportation Services Contractor
Traction Power Technicians	Initial Training and Certification Level I/II/III	Every 3 years through comprehensive testing	Valley Metro MOW Maintenance
Signals and Communications	Initial Training and Certification Level I/II	Every 3 years through comprehensive testing	Valley Metro MOW Maintenance
Train Operators	Initial 7-week Training and Certification Level I	Annually Every 2 years	Transportation Services Contractor

POSITIONS REQUIRING TRAINING AND CERTIFICATION	FREQUENCY OF TRAINING AND RECERTIFICATION		ORGANIZATION PROVIDING TRAINING
	Upon Hiring	**Recertification**	
Vehicle Maintenance Personnel	Initial Training and Certification Level I/II/III	Every 3 years	Valley Metro LRV Maintenance
Facilities Maintenance	Initial Training and Certification Level I/II/III	As applicable to skill and craft	Oversight and approval by Valley Metro Facilities Management
Track Maintenance	Initial Training and Certification Level I/II/III	Every 2 years	Valley Metro MOW Maintenance

Additionally, some staff members are required to complete additional training and retraining to ensure compliance with 49 CFR Part 672. Below is a list of various safety-related training courses along with job titles of those who will be required to complete this additional training:

- **PTSCTP – Rail:**
  - Director, SSQA
  - Manager, Transit Safety
  - Transit Safety Specialist
  - Program Manager Safety & Security
  - Manager, Transit Security
  - Manager, Quality Assurance
  - Senior Project Compliance Coordinator
  - Chief Operations Officer
  - Manager, Rail Operations
  - Transportation Services Contractor – Safety Manager & Assistant Safety Manager
  - Others responsible for accident investigations

- **TSSP – Rail:**
  - Director, SSQA
  - Manager, Transit Safety
  - Transit Safety Specialist
  - Program Manager Safety & Security
  - Manager, Transit Security
  - Quality Assurance Manager
  - Senior Project Compliance Coordinator
  - Chief Operations Officer
  - Manager, Rail Operations
  - Transportation Services Contractor – Safety Manager & Assistant Safety Manager

- **TSI SMS Awareness:**
    - Valley Metro Executive Leadership, Directors, and Managers

- **NIMS 100 and 200:**
    - Director, SSQA
    - Manager, Transit Safety
    - Manager, Transit Security
    - Chief Operations Officer
    - Manager, Rail Operations
    - Director, Capital Development
    - Capital Development Deputy Directors
    - Capital Development Managers

- **Track Access Training:**
    - Any Valley Metro employee or contractor who works on or near the rail system guideway

- **Overview of Valley Metro's ASP/General Safety/Security/Emergency Preparedness Orientation**
    - All Valley Metro employees and contracted staff

10.0 CORRECTIVE ACTION PLANS

10.1 SOURCES OF CORRECTIVE ACTION PLANS

When issues arise that require corrective action, a corrective action plan (CAP) is created. There are multiple ways an issue may be brought to the attention of the SSQA team, including, but not limited to the following:

- Hazards identified/reported by the Safety and Security Committee, employees, contractors, external agencies (such as ADOT, FTA, FRA, and NTSB), member cities public safety, board members or the public
- Valley Metro ISSA Findings
- Audits/Inspections, including findings from ADOT's triennial audit of Valley Metro
- Issues/opportunities for improvement or hazards identified as a result of an accident/incident investigation
- Issues/opportunities for improvement or hazards identified as a result of performing trend analysis
- Issues/opportunities for improvement or hazards identified as a result of an After-Action Review
- Issues/opportunities for improvement or hazards identified during or after the completion of a construction project, such as Operational Hazard Assessments and site walks (see section 8.2.1 related to the Safety and Security Certification Program)
- Any other means that a hazard is brought to the attention of the Valley Metro Safety Division requiring further mitigation or possibly policy/procedure change, training, equipment, or system modification.

10.2 CORRECTIVE ACTION PLANS

When an issue requiring corrective action is identified, a Corrective Action Plan is created. The proposed corrective action plan is then sent in writing to SSO for review and approval. Section 7.2.4 outlines the process for notification and corrective action planning for unacceptable hazards.

Below is the template used for corrective action planning.

CAP: Source	Where the CAP was generated from. For example, triennial audit, Internal Safety and Security Audit, employee report, accident report, etc.
CAP: ID Number	Unique ID number generated by SSQA
CAP: Identified Action	Issue that is being addressed in the corrective action plan
CAP: SOA Approved?	Did SSO approve the CAP?
CAP: Proposed Implementation Date	Anticipated date to implement CAP actions
CAP: Actual Implementation Date *(closed only)*	When CAP actions were actually implemented

CAP: Individual Responsible for Implementation	Who (by name) is responsible for ensuring the CAP is implemented
CAP: Department Responsible for Implementation	Which department/division is responsible for implementing the CAP
CAP: Status	Status – Open, Closed, Pending
CAP: Implementation Verified? *(closed only)*	Date the implementation of CAP actions were verified
CAP: Issues Preventing Resolution *(open only)*	What, if any, issues are preventing resolution of the CAP
CAP: Status Updates	Narrative of updates of work to implement CAP
CAP: Alternative	If needed
CAP: ADOT Response	Acceptance date by SSO
SA: Effective, Appropriate, Implemented as Intended	Refers to a yes or no response provided by the safety department of the RTA. A yes response must be based on an assessment of the performance outcomes of the safety risk mitigation following closure of the CAP. A no response must be accompanied with a detailed explanation and a proposed alternative CAP
SA: Safety Performance Monitoring & Measurement	Refers to a brief narrative summary of the process used by the RTA to assess safety performance such as trend analysis of relevant safety concerns, internal safety reporting programs, internal audits or other compliance assessments

Corrective actions plans developed as the result of an accident are included in the accident reports that are sent to SSO and they are also recorded on the Accident / Incident tracking log. Valley Metro Safety monitors these corrective action plans that are created by the Transportation Services Contractor and follows-up to ensure the activities are completed according to the details outlined in the corrective action plan. Corrective action plans generated from accidents and incidents are reviewed as part of the review of the tracking log at the quarterly meetings between SSO and Valley Metro.

10.3 CORRECTIVE ACTION PLAN MONITORING LOG

Each of the Corrective Actions Plans is then tracked by the SSQA division on a monitoring log. Information collected in the CAP Monitoring Log includes:

- Source – how the issue was reported (audit, incident investigation, employee report, design review, ADOT finding, FTA finding, etc.)
- CAP Internal Tracking ID Number – the CAP Monitoring Log is numbered sequentially each year
- Identified Action – a narrative of the actions that should occur
- SOA Approved – indicates if ADOT SSO has approved the CAP
- Proposed Implementation Date

- Actual Implementation Date
- Individual Responsible for Implementation – must include name(s) of those responsible for implemented the actions
- Department Responsible for Implementation
- CAP Status – Open or Closed
- Implementation Verified
- Issues Preventing Resolution

10.4 COMMUNICATION RELATED TO CORRECTIVE ACTION PLANNING

Valley Metro submits proposed corrective action plans in writing to SSO for review and approval. The column entitled "CAP: SOA Approved" on the corrective action plan is used to indicate SSO's written approval of Valley Metro's proposed corrective actions in accordance with the Program Standard. If the SSO Program Manager and Valley Metro's CSO are unable to resolve a CAP disagreement in a timely manner, they will jointly bring the issue to the attention of Valley Metro's Accountable Executive. If an agreement still cannot be reached, Valley Metro and SSO will follow the provisions outlined in the Program Standard.

Valley Metro notifies SSO of unacceptable hazards in accordance with section 7.2.4 of this document.

In the event a situation occurs that requires immediate / emergency corrective action, Valley Metro will implement the actions needed to address the situation. Once the situation is no longer an emergency, Valley Metro will document the mitigations / corrective actions that were taken in response. This information will be entered onto the appropriate tracking log (accident, incident, near miss, CAP log, etc.) as soon as reasonably possible for submission to SSO.

Valley Metro provides periodic updates to SSO in accordance with the Program Standard. As discussed in section 8.1.1, corrective action plans may also be discussed as part of the quarterly hazard management meetings between Valley Metro and SSO. Additional meetings/conversations may be held to review specific line items on an as needed basis.

The CAP log should be updated at least monthly by the responsible parties. If the need to change or modify a CAP occurs, the responsible person must update each applicable column of the CAP Monitoring Log, provide a detailed explanation for the change, outline the subsequent steps towards mitigation, and demonstrate an acceptable level of risk for the Safety and Security Committee's (or other committee, as appropriate) and SSO's approval. If there are obstacles/barriers preventing close out of a CAP, the Director, SSQA reaches out to the CEO/Accountable Executive for assistance. Overall management of the corrective action plan monitoring log and communication with SSO related to corrective action planning is the responsibility of the SSQA division.

11.0 DOCUMENTATION, DEFINITIONS, AND ACRONYMS

11.1 DOCUMENTATION

Documentation is maintained in accordance with Valley Metro's Records Retention policy. ASP and SMS documentation is retained for a minimum of three years. Upon the request of the FTA, any other Federal entity, or ADOT SSO, Valley Metro will make documentation available in accordance with its policy and procedures for releasing information and protecting SSI.

11.1.1 TRAINING DOCUMENTATION

Each division is responsible for maintaining their corresponding training records for their employees, consultants, contractors, and sub-tier contractors. Records are kept in a secure location and are available to Valley Metro's SSQA team for periodic audit.

Division managers involved with consultants, contractors and sub-tier contractors ensure that outside safety documents and procedures shall not conflict with Valley Metro safety and security requirements. Divisions will not allow consultant, contractor, or sub-tier contractor documents to supersede Valley Metro safety training during the duration of the contract term.

All personnel attending the Track Access Course are required to sign-in as a record of attending the class. ID cards and hard hat stickers are issued based on successful completion of the course. Records are maintained by the Transportation Services Contractor in a secured location and are available for audit on an as needed basis.

11.2 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. An accident must be reported in accordance with the thresholds for notification and reporting set forth in ADOT's Program Standard. Loss of life resulting from illness or other natural causes are not considered reportable accidents.

Accountable Executive means a single, identifiable person who has ultimate responsibility for carrying out the Public Transportation Agency Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. 5326.

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 service in other operational or maintenance capacities, unless the Chief Safety Officer is employed by a transit agency that is a small public transportation provider as defined in

this part, or a public transportation provider that does not operate a rail fixed guideway public transportation system.

Collision (non-Rail Grade Crossing) includes a train to train, train to vehicle, train to object, and train to individual collision that does not occur at a Rail Grade Crossing. Suicides or trespassing-related collisions not occurring at a Rail Grade Crossing are defined as "Collision (non-Rail Grade Crossing)" with a probable cause of "suicide" or "trespasser" as applicable.

Conflict of Interest generally means a scenario when a person places him/herself in a position where any official act or action taken by them is, may be, or appears to be, influenced by considerations other than the general public interest. All employees and Contractors subject to the requirements of the Program Standard occupy a position of public trust and confidence and should avoid not only actual breaches of public trust, but also even the appearance of conflicts of interest. An organizational conflict of interest occurs where a contractor is unable, or potentially unable, to render impartial assistance or advice to the recipient due to activities, relationships, contracts, or circumstances which may impair the contractor's objectivity, or a contractor has an unfair competitive advantage.

Consequence means an effect of a Hazard involving injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment.

Contractor means an entity that performs tasks on behalf of the FTA, a State Safety Oversight Agency, or an RTA through contract or other agreement. The RTA may not be a contractor for the State Safety Oversight Agency.

Day means calendar day, unless otherwise specified. When a period of time, such as 30 days, ends on a weekend or holiday, then the next working day is acceptable.

Derailment means a non-collision Event in which one or more wheels of a rail transit vehicle unintentionally leaves the rails.

Designated Personnel means (1) Employees identified by a rail public transportation system whose job function requires them to be directly responsible for safety oversight of the public transportation provided by the system; or (2) Employees and contractors of a State Safety Oversight Agency whose job function requires them to conduct safety audits and safety examinations of the rail public transportation systems subject to the jurisdiction of the State Safety Oversight Agency. Designated Personnel may also be referred to as "covered" personnel.

Directly Responsible for Safety Oversight means public transportation agency personnel whose primary job function includes the development, implementation, and review of the agency's safety plan, and/or the SSOA requirements for the Rail Fixed Guideway Public Transportation System pursuant to 49 CFR Part 674.

Disruption of Operations means an Event that requires the RTA to implement a set of control actions (e.g., cancel trips, delay trips, establish bus bridges, reverse move, single track, etc.) that reestablish the continuity in the planned flow of rail transit vehicles and operations and maintenance personnel such that all passengers can reach their intended destinations as soon as possible.

Equivalent Authority means an entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient's Public Transportation Safety Plan.

Evacuation due to life safety reasons means all evacuations of Rail Transit Controlled Property for life safety events. A life safety event is one that presents an imminent danger to ALL people in or on Rail Transit Controlled Property. This includes evacuations of rail transit vehicles and rail transit property, such as stations. The evacuation may be due to the presence of smoke, fuel fumes, suspicious package, bomb threat, etc.

Evacuation for non-life safety reasons means evacuations that are not for a life safety reason such as an evacuation of a train into the right-of-way or onto adjacent track; or customer self-evacuation or transfer of passengers to rescue vehicles or alternate means of transportation due to obstructions, loss of power, mechanical breakdown and system failures, or damage.

Event means any Accident, Incident, or Occurrence.

FTA means the Federal Transit Administration, an agency within the United States Department of Transportation.

Hazard means any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment.

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.

Investigation means the process of determining the causal and contributing factors of an accident, incident, or hazard, for the purpose of preventing recurrence and mitigating risk.

National Public Transportation Safety Plan means the plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. Chapter 53.

Near Miss means an undesired Event (as defined in the RTA's Accident / Incident Investigation Plan) that under slightly different circumstances could have resulted in injuries to people, damage to property or the environment, and / or loss or disruption of service.

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.

Operator of a public transportation system means a provider of transportation as defined under 49 U.S.C. 5302(14).

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

Passenger Operations means when any aspect of the RTA operations is initiated with the intent to carry passengers.

Patron means, for the purposes of Event reporting, an individual waiting for or leaving rail transit at stations, in mezzanines, on stairs, escalators, or elevators, in parking lots, and other transit-controlled property.

Performance measure means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress towards meeting the established targets.

Performance target means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Program Standard means a written document developed and adopted by the State Safety Oversight Agency that describes the polices, objective, responsibilities, and procedures used to provide RTA safety and security oversight.

Public means, for the purpose of Event reporting, all others who encounter the rail transit system, including pedestrians, automobile drives, and trespassers.

Public Transportation Agency Safety Plan means the documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329 and this part (673.5).

Public Transportation Safety Certification Training Program means either the certification training program for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems, and employees of public transportation agencies directly responsible for safety oversight, established through interim provisions in accordance with 49 U.S.C. 5329(c) (2), or the program authorized by 49 U.S.C. 5339 (c)(1).

Rail fixed guideway public transportation system means any fixed guideway system that uses rail, is operated for public transportation, is within the jurisdiction of a State, and is not subject to the jurisdiction of the Federal Railroad Administration, or any such system in engineering or construction. Rail fixed guideway transportation systems include but are not limited to rapid rail, heavy rail, light rail, monorail, trolley, inclined plane, funicular, and automated guideway.

Rail Grade Crossing (as defined in the National Transit Database glossary) means an intersection of roadways, railroad tracks, or dedicated transit rail tracks that run across mixed traffic situations with motor vehicles, streetcar (SC), light rail (LR), commuter rail (CR), heavy rail (HR) or pedestrian traffic; either in mixed traffic or semi-exclusive situations. The boundaries of the intersection will be defined by the municipal, county, or state jurisdiction that owns and controls the roadway.

Rail Grade Crossing Collision includes train to train, train to vehicle, train to object, and train to individual collisions that OCCUR at rail grade crossing. For mixed traffic environments, rail grade crossing collisions are defined ONLY as collisions that occur at street intersections. Suicides or trespassing-related collisions occurring at a Rail Grade Crossing are defined as “Rail Grade Crossing Collision” with a probable cause of “suicide” or “trespasser” as applicable. The boundaries of the intersection will be defined by the municipal, county, or state jurisdiction that owns and controls the roadway.

Rail transit agency means any entity that provides services on a rail fixed guideway public transportation system.

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

Rail Transit Vehicle means the Rail Fixed Guideway Public Transportation Agency’s rolling stock, including, but not limited to, passenger and maintenance vehicles.

Right-of-Way (ROW) means the area through which a rail transit vehicle travel (the vehicle’s dynamic envelope).

Risk means the composite of predicted severity and likelihood of the potential effect of a hazard.

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

Safety Assurance means processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation, and to ensure that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information.

Safety Audit means a review or analysis of safety records and related materials, including, but not limited to, those related to financial accounts.

Safety and Security Certification means the process applied to project development to ensure that all practical steps have been taken to optimize the operational safety and security of the project during engineering, design, construction, and testing before the start of passenger operation.

Safety Management Policy means a transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees regarding safety.

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 systemic procedures, practices, and policies for managing risks and hazards.

Safety Management System (SMS) Executive means a Chief Safety Officer or an equivalent.

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.

Safety risk assessment means the formal activity whereby a transit agency determines Safety Risk Management priorities by establishing the significance or value of its safety risks.

Safety Risk Management means a process within a transit agency's Public Transportation Agency Safety Plan 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 the injury was received; (2) Results in a fracture of any bone (except simple fractures of fingers, toes, or noses); (3) Causes severe hemorrhage, 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.

Small public transportation provider means a recipient or subrecipient of Federal financial assistance under 49 U.S.C. 5307 that has one hundred (100) or fewer vehicles in peak revenue service and does not operated a railed fixed guideway public transportation system.

State means a State of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.

State of good repair means the condition in which a capital asset is able to operate at a full level of performance.

State Safety Oversight Agency means an agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth in 49 CFR Part 674.

Transit agency means an operator of a public transportation system.

Transit Asset Management 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, as required by 49 U.S.C. 5326 and 49 CFR part 625.

Worker means, for the purposes of Event reporting, a Valley Metro employee or contractor.

11.3 ACRONYMS

AAR	After Action Report
ADOT	Arizona Department of Transportation
AIP	Accident / Incident Investigation Plan
ASP	Agency Safety Plan
BASE	Baseline Assessment and Security Enhancement Program
CAP	Corrective Action Plan
CAS	Customer Assistance System
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
COO	Chief Operations Officer
CPTED	Crime Prevention Through Environmental Design
CSO	Chief Safety Officer
DCC	Dispatch Communications Center
DCM	Design Criteria Manual
DOT	Department of Transportation
FLSSC	Fire/Life Safety and Security Committee
FTA	Federal Transit Administration
IAPP	Internal Safety and Security Audit Program Plan
LRT	Light Rail Transit
LRV	Light Rail Vehicle
MOE	Maintenance of Equipment
MOW	Maintenance of Way
NTD	National Transportation Database
NTSB	National Transportation Safety Board
OCC	Operations Control Center
OHA	Operational Hazard Analysis
OMC	Operations and Maintenance Center
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PHA	Preliminary Hazard Analysis
PM	Preventative Maintenance
PRO	Pre-Revenue Operations
PTSCTP	Public Transportation Safety Certification Training Program
RAC	Rail Activation Committee
RCRC	Rail Change Review Committee
RMC	Regional Management Committee
RPTA	Regional Public Transportation Authority
RST	Regional Security Team

RTA	Rail Transit Agency
RTAG	Rail Transportation Advisory Group
SCADA	Supervisory Control and Data Acquisition
SDS	Safety Data Sheet
SEPP	Security Emergency Preparedness Plan
SMS	Safety Management Systems
SOP	Standard Operating Procedure
SSC	Safety and Security Committee
SSCP	Safety and Security Certification Plan
SSCRC	Safety and Security Certification Review Committee
SSCVR	Safety and Security Certification Verification Report
SSI	Security Sensitive Information
SSMP	Safety and Security Management Plan
SSO	State Safety Oversight
SSQA	Safety, Security and Quality Assurance
SSRR	Safety and Security Readiness Review
TAM	Transit Asset Management
TAMP	Transit Asset Management Plan
TSA	Transportation Security Administration
TSC	Tempe Streetcar
TSSP	Transit Safety and Security Program
TVA	Threat and Vulnerability Assessment
UASI	Urban Area Security Initiative
UOR	Unusual Occurrence Report
VMR	Valley Metro Rail

11.4 REFERENCES

49 CFR Part 625, Transit Asset Management

49 CFR Part 630, National Transit Database

49 CFR Part 659, Rail Fixed Guideway Systems

49 CFR Part 670, Public Transportation Safety Program

49 CFR Part 672, Public Transportation Safety Certification Training Program

49 CFR Part 673, Public Transportation Agency Safety Plan

49 CFR Part 674, State Safety Oversight

49 U.S. Code § 5329 - Public Transportation Safety Program

FTA, Path Towards Safety Management Systems Implementation

FTA, ASP and SMS – The Role of the Transit Agency's CSO/SMS Executive and Key Staff

FTA, Safety Management Systems Framework

Appendix A – SSO Event Notification Thresholds & Reporting Timeframes

Copied from ADOT SSO Program Standard, Revision 7

ACCIDENTS	
ADOT REPORTABLE ACCIDENTS	**FTA REPORTABLE ACCIDENTS**
Criteria for ADOT	**Criteria for FTA**
A loss of life. Loss of life means a fatality at the scene or within 30 days following the accident.	A loss of life. Loss of life means a fatality at the scene or within 30 days following the accident.
A report of serious injury to a person. 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 (except simple fractures of fingers, toes, or nose); (3) Causes severe hemorrhages, nerve, muscle, or tendon damage; (4) Involves any internal organ; or Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.	A report of serious injury to a person. 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 (except simple fractures of fingers, toes, or nose); (3) Causes severe hemorrhages, nerve, muscle, or tendon damage; (4) Involves any internal organ; or Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.
Property damage resulting from: A collision involving a rail transit vehicle. (**see Note 1**)	Property damage resulting from: A collision involving a rail transit vehicle. ***(see Note 1)***
Any derailment of a rail transit vehicle.	Any derailment of a rail transit vehicle.
A collision involving a rail transit vehicle that results in serious injury, fatality, or substantial damage. ***(see Note 2)***	A collision involving a rail transit vehicle that results in serious injury, fatality, or substantial damage. ***(see Note 2)***
A runaway train	A runaway train
An evacuation for life safety reasons.	An evacuation for life safety reasons.
Any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.	Any derailment of a rail transit vehicle, at any location, at any time, whatever the cause. ***(see Note 3)***
Any fire or smoke condition that meets the definition for "disruption of operations" at any location, at any time, whatever the cause. ***(Note 5)***	Any fire, smoke, or fume condition, that results in an evacuation, serious injury, or fatality. (***see Note 4***)
Any event that may attract or has attracted a significant amount of media, state, or federal agency attention. (***see Note 6)***	
Examples of Accidents	
A collision between a rail transit vehicle and another rail transit vehicle	
A collision involving a rail transit vehicle at rail grade crossing resulting in serious injury, fatality, or substantial damage	
A collision involving a rail transit vehicle with a person resulting in serious injury or fatality	
A collision involving a rail transit vehicle with an object resulting in a serious injury or fatality	
A derailment in the mainline or yard	
An RTA evacuation or passenger self-evacuation of a train or station for life safety reasons such as fire or smoke condition, bomb threat, or suspicious package	
Required Actions for Accidents	
RTA to notify ADOT within **2 hours** of the event	

RTA to notify FTA within **2 hours** of the event, if it meets FTA criteria (see Notes)
RTA to provide NTD report to ADOT within **30 days** as supporting document with the accident investigation status report or final report.
RTA to report to FTA within **30 days** via the NTD
RTA to record in the quarterly Accident Tracking Log for causation and trend analysis (SMS)

INCIDENTS
Criteria for ADOT-Reportable Incidents
A personal injury that is **not** a serious injury.
One or more injuries requiring medical transportation away from the event
Non-collision related damage to equipment, rolling stock, or infrastructure that disrupts the operations of the RTA
Examples of Types of Incidents
A hard start/stop of a rail transit vehicle that results in a passenger that requires transport away from the scene.
A criminal act that results in bruises, scrapes, and scratches such as an assault on a person on a rail transit vehicle or rail station platform.
Vandalism of rail transit vehicle (e.g., broken window, offensive graffiti) that requires removal of the vehicle from revenue service.
Evacuation of a train into the ROW or onto adjacent track, including self-evacuations, for reasons other than life safety reasons
Required Actions for Incidents
RTA to report to FTA within **30 days** via the NTD
RTA to record in the **quarterly** Accident Tracking Log for causation and trend analysis (SMS)

OCCURANCES
Criteria for ADOT-Reportable Occurrences
No personal injury
Non-collision related damage to equipment, rolling stock, or infrastructure that does not disrupt the operations of the RTA
Examples of Types of Occurrences
Close calls/Near misses
Safety policy and rule violations
Red signal overruns
Broken crossing gate
Vandalism of rail transit vehicle (e.g., broken window, offensive graffiti) that does not require removal of the vehicle from revenue service.
Required Actions for Occurrences
RTA to record in the **quarterly** Accident Tracking Log for causation and trend analysis (SMS)

Note 1*:* FTA two-hour notification is **not** required for events involving property damage, unless the event results in "substantial damage," but ADOT notification and accident investigation report requirements still apply.

Note 2: FTA two-hour notification is **not** required for certain low-speed collisions involving a rail transit vehicle that do not disrupt operations, for example a mirror strike, as discussed in Appendix A of 49 CFR Part 674. ADOT two-hour notification as an accident is also **not** required for a mirror strike; however, ADOT requires the RTA to record these events as occurrences in the quarterly Accident Tracking Log for causation and trend analysis (SMS).
Note 3: FTA two-hour notification is **not** required for split or trailed switches, if one or more wheels do not unintentionally leave the rails.

Note 4: FTA two-hour notification is **not** required for fire, smoke, or fume conditions unless the event results in an evacuation, serious injury, or fatality.

Note 5: As specified in PM.7.1, General Definitions, "Disruption of Operations" is defined as: *"An (Event) that requires the (RTA) to implement a set of control actions (e.g., cancel trips, delay trips, establish bus bridges, reverse move, single track, etc.) that reestablish the continuity in the planned flow of rail transit vehicles and operations and maintenance personnel such that all passengers can reach their intended destinations as soon as possible."*

Note 6: As a courtesy to ADOT, the RTA will notify ADOT of any event that may attract or has attracted a significant amount of media, state, or federal agency attention.

Appendix B: SSO Notification Procedures

Based on the ADOT SSO Program Standard, Revision 7.

TWO HOUR NOTIFICATION

The Manager, Transit Safety, the Rail Safety Specialist, or the Manager, Transit Security will provide an initial notification to the ADOT SSO within **two (2) hours** of a reportable event. This notification is sent via email to ssonotification@azdot.gov (preferred) or by phone, leaving a detailed message or text if there is no answer. Valley Metro will provide as much of the following information as possible: event type (fatality, injuries, property damage, evacuation, derailment, or other); location, date, and time of the event; initial assessment of fatalities and injuries; and preliminary estimate of property damage.

If the event involves a fatality and/or a derailment, the on-call SSO representative will also be contacted by cell phone.

PRELIMINARY REPORT

Within **forty-eight (48) hours** of a reportable event, Valley Metro will provide another update via email to the ADOT SSO point of contact to report its initial findings of fact; its investigation plans; FTA, FRA, or NTSB involvement in the investigation; and whether an ad hoc investigation committee will be convened. The preliminary report will also include:

- Notification time (ADOT, FTA, FRA, NTSB – as applicable)
- Name and job title of person reporting
- Event type (fatality, injuries, property damage, evacuation, derailment or other)
- Location, date, and time of event
- Fatalities and injuries (number, severity)
- Rail transit vehicle(s) involved (type, number) and other vehicle(s) involved (describe)
- Preliminary estimate of property damage
- Description of the event
- Implemented and/or planned corrective actions
- Ongoing investigation activities

STATUS REPORTS

Until the investigation is completed, Valley Metro will prepare and submit monthly status investigation updates. These updates will at a minimum include:

- Minutes of any meeting held by Valley Metro's ad hoc reportable event investigation committee or contractor
- Disclosure of any immediate actions Valley Metro has taken, planned, or completed
- Principal issues or items currently being evaluated
- Overall progress and status of the investigation

As its discretion, Valley Metro may submit a summary report of all on-going investigation status reports to ADOT SSO in lieu of several individual status reports.

At any time during an investigation, Valley Metro will be prepared to provide a full briefing on the known circumstances of the event, status of Valley Metro's, FTA's, FRA's or NTSB's investigations and investigation activities.

FINAL REPORT

Each Valley Metro investigation conducted on behalf of ADOT SSO must be documented in a final report that includes a description of investigation activities, findings, identified causal factors, and a corrective action plan (if required). As specified in its accident incident procedures and as recommended by ADOT SSO, Valley Metro separates its final investigation report into two parts:

- Description of investigation activities, investigation findings, and determination of the most probable cause and additional contributing causes
- Recommendations to prevent recurrence and a corrective action plan, if required

Valley Metro may utilize investigations from its safety department or from front line departments such as operations and maintenance; however, identification of findings of causation must be made and report content requirements listed above must be met.

REVIEW AND APPROVAL PROCESS

Upon receipt of Valley Metro's Accident/Incident Investigation Final Report, ADOT SSO will review in accordance with its checklist for reviewing the RTA's Accident/Incident Investigation Final Reports. If ADOT SSO does not agree with the description of the investigation, the identification of primary and contributing causes, or the findings of the Final Report, ADOT SSO will communicate in writing to the RTA's safety and/or security point-of-contact the area(s) of disagreement or concern. ADOT SSO will work with Valley Metro to address these issues in Valley Metro's Final Report. In the event that an agreement cannot be reached on these issues, ADOT SSO will issue its own accident investigation report, which may be no more than Valley Metro's Final Report and ADOT SSO dissent.

ADOT will review the Final Report within 30 calendar days of receipt. If the review will take longer than 30 calendar days, ADOT will notify Valley Metro in writing on or before Day 30 and provide a revised date for the completion of the review checklist.

To reduce the potential for conflict, ADOT SSO encourages Valley Metro to submit a draft version of the Final Report to the ADOT SSO point-of-contact so that agreement may be obtained on the most probable cause, additional contributing causes, corrective action plan (if required), and an implementation schedule before the Final Report is finalized and formally issued by Valley Metro.

Appendix C: NTSB Event Notification Thresholds & Reporting Timeframes

Copied from ADOT SSO Program Standard, Revision 7.

The RTA will notify the NTSB by contacting the NTSB Response Operations Center at (844) 373-9922 at the earliest practicable time following any one of the following accidents:

- No later than **2 hours** after an accident which results in:
  - A passenger or employee fatality or serious injury to two or more crew members or passengers requiring admission to a hospital
  - The evacuation of a passenger train
  - A fatality at a grade crossing
- No later than **4 hours** after an accident which does not involve any of the circumstances listed above but which results in:
  - Damage (based on a preliminary gross estimate) of $150,000 or more for repairs, or the current replacement cost, to railroad and non-railroad property
  - Damage of $25,000 or more to a passenger train and railroad and non-railroad property

Appendix D: FTA Event Notification Thresholds & Reporting Timeframes

Copied from FTA's website (Rev Sep 24, 2021)

Two-Hour Accident Notification

If an event meets any of the conditions in the following checklist, it is an accident, and you must notify the State Safety Oversight Agency (SSOA) and Federal Transit Administration (FTA) within two hours after it occurs.

When an event includes multiple accident types, in your notification, please classify the accident type as the accident that occurred first.

How do I notify FTA of an accident?

Contact the U.S. Department of Transportation Crisis Management Center (CMC) within two hours of a reportable accident, by email (recommended method) or phone:

TOC-01@dot.gov/ 202-366-1863

When providing two-hour notifications, please submit accident information details as specified in your SSOA's program standard. The SSO required notifications may include, but are not limited to, a summary of the event and pertinent details such as:

- Accident date, time, location and name of the Rail Transit Agency (RTA) providing the notification
- When RTA has more than one rail mode, providing the rail mode and/or line involved in the accident (Heavy Rail/Subway, Light Rail, Streetcar, etc.)
- Number of fatalities, serious injury, persons requiring immediate medical transport
  After an RTV related collision was there substantial damage or towing of RTV or POV
- Primary and secondary event types (e.g. collision, derailment, fire, etc.)

Two-Hour Accident Notification Quick Reference Checklist

☐ **Fatality** – A death or suicide occurring at the scene or within 30 days following the accident.

Additional guidance:

This requirement includes all loss of life (fatality) that occur on a transit property or are related to transit operations or maintenance. This requirement excludes deaths resulting from illness or other natural causesand criminal homicides that are not related to collisions with a rail transit vehicle.

☐ **Serious injury** – Any injury that:

1. Requires hospitalization for more than 48 hours, commencing within seven days from the date theinjury was received;
2. Results in a fracture of any bone (except 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 five percent of the body surface.

Additional guidance:

This requirement includes all serious injuries that occur on a transit property or are related to transit operations or maintenance. This requirement excludes serious injuries resulting from illness or other natural causes and criminal assaults that are not related to collisions with a rail transit vehicle.

☐ **Collision** –

1. All collisions between a rail transit vehicle and another rail transit vehicle.
2. All collisions resulting in substantial property damage, serious injury or fatality.

Additional guidance:

You are required to provide two-hour notification of all collisions involving two or more rail transit vehicles, and all collisions involving at least one rail transit vehicle at grade crossing, with a person, or with an object that results in substantial property damage, serious injury or fatality.

Substantial damage is any physical damage to transit or non-transit property including vehicles, facilities, equipment, rolling stock, or infrastructure.

Substantial damage **INCLUDES** damage which adversely affects the structural strength, performance, or operating characteristics of the vehicle, facility, equipment, rolling stock, or infrastructure requiring towing, rescue, onsite maintenance, or immediate removal prior to safe operation.

☐ Substantial damage **EXCLUDES** damage such as cracked windows, dented, bent or small punctured holesin the body, broken lights, mirrors, or removal from service for minor repair or maintenance, testing, or video and event recorder download.

☐ **Runaway train** – A train that is no longer under the control of a driver regardless of whether theoperator is physically on the vehicle at the time.

Additional guidance:

☐ This requirement is only applicable to trains and not all rail transit vehicles.

☐ **Evacuation/life safety reason** – An evacuation for a life safety reasons is a condition that occurs when persons depart from transit vehicles or facilities for life safety reasons, including self-evacuation.

Additional guidance:

A life safety reason may include a situation such as a fire; the presence of smoke or noxious fumes; a fuel leak; a vehicle fuel leak; an electrical hazard; a bomb threat; a suspicious item or other hazard that constitutes a real or potential danger to any person.

☐ Do not provide Two-Hour Accident Notifications for evacuations that **are not** for a life safety reason suchas an evacuation of a train into the right of-way or onto adjacent track; or customer self- evacuation or transfer of passengers to rescue vehicles or alternant means of transportation due to obstructions, loss of power, mechanical breakdown and system failures, or damage.

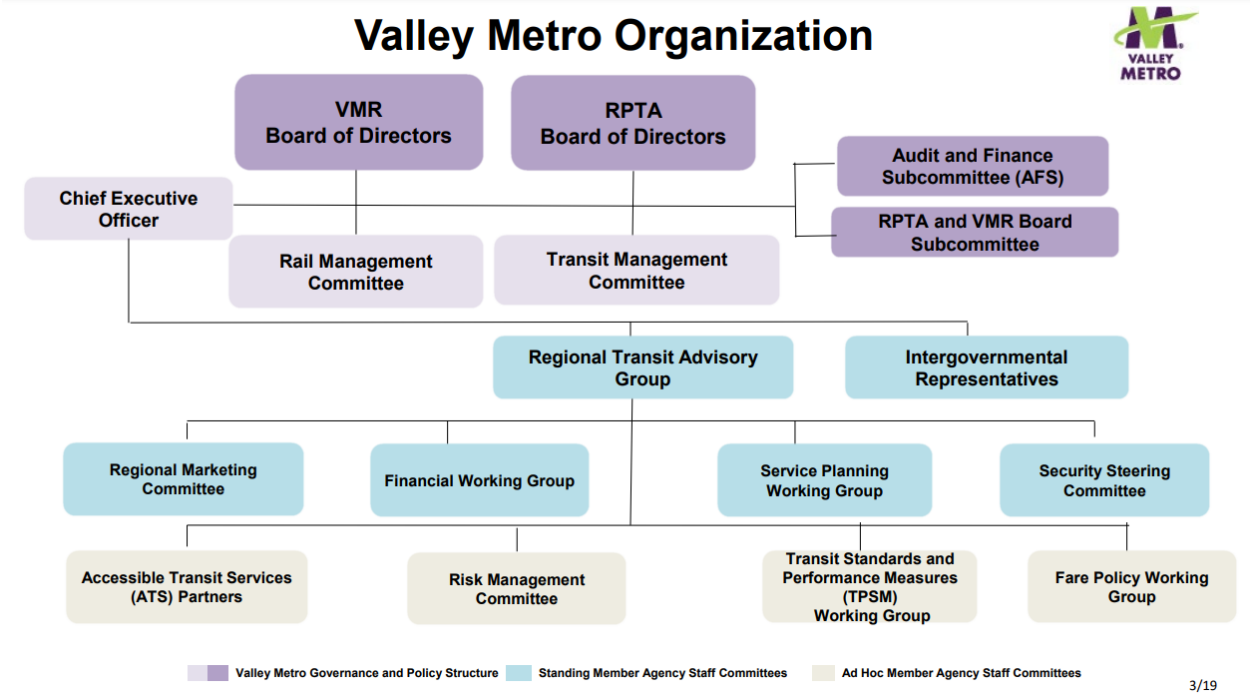
☐ **Derailment** – A non-collision event in which one or more wheels of a rail transit vehicle unintentionally leaves the rails. Two-Hour Accident notification is required anytime there is the derailment of a rail transit vehicle at any location, at any time, whatever thecause.

☐ ☐ **Federal Railroad Administration (FRA) notifications** – Anytime an RTA must notify the FRA of an accident as defined by 49 CFR 225.5 (i.e. shared use of the general railroad system trackage or corridors), the RTA must also notify the SSOA and FTA of the accident within the same time frame established by the FRA.

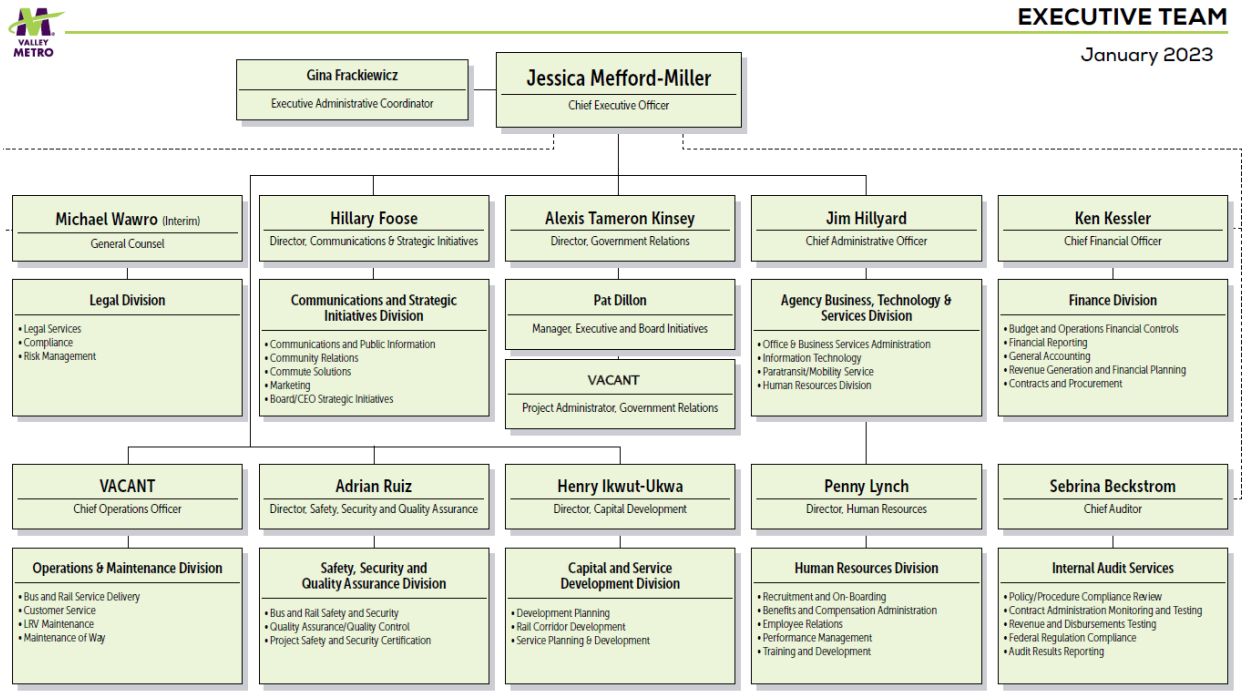
Appendix E: Organizational Charts / Reporting Structures

Below are high-level Valley Metro organizational charts. For efficiency, the organizational charts in this document will be updated as part of the annual document review. In between revisions of this document, the most current organizational chart can be obtained by contacting the Director, SSQA. If Valley Metro proposes organizational and staffing changes to positions with roles and responsibilities to implement the ASP, SSO requires notification in writing within five business days. In its communication to SSO, Valley Metro's CSO will state any measures and mitigations in effect to ensure compliance to federal and state rail safety requirements. SSO, in consultation with the FTA, will determine if the proposed organizational and staffing changes affect Valley Metro's ability to implement federal and state rail safety requirements and will communicate its determination in writing with additional technical guidance and directives, if any.

VALLEY METRO ORGANIZATION

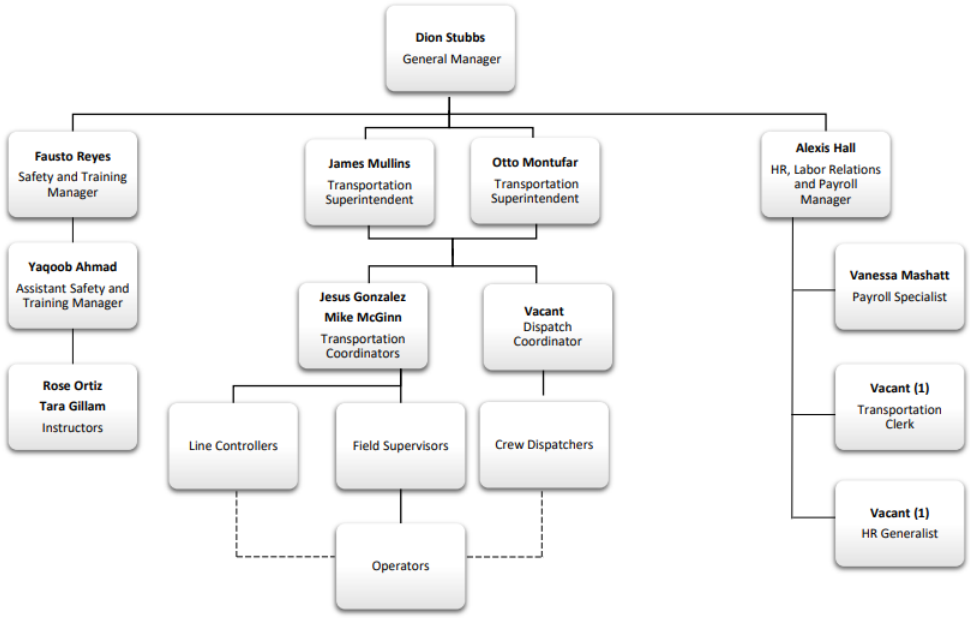


EXECUTIVE DIVISION



TRANSPORTATION SERVICES CONTRACTOR

Phoenix Light Rail Transportation Services Organizational Chart



CONTRACTED SERVICES

- The **Transportation Services Contractor** reports to the **Deputy Director, Transportation and Project Integration** (as designated by the Chief Operations Officer)

- The **Facilities Maintenance Contractor, Cleaning Contractor, and Landscaping Contractor** reports to the **Manager, Facilities Maintenance** (as designated by the Chief Operations Officer)

- The **Security Services Contractor** reports to the **Security Coordinator** (as designated by the Manager, Transit Security

Appendix F – SMS Implementation Plan (Revision 3, October 2022)

This SMS Implementation Plan template was provided to Valley Metro by Arizona Department of Transportation in April 2020 and has been updated to reflect changes to timeline and personnel responsibility (Technical Assistance Document 20-01).

PURPOSE

The SMS Implementation Plan serves as a companion document to the Agency Safety Plan (ASP). This plan describes the details of who, what, where, when, and how the agency will build its SMS by formalizing the processes and procedures necessary to develop, operationalize, and verify implementation. This plan ensures that key roles and responsibilities have been established, critical activities have been identified, significant timelines and milestones scheduled, and necessary resources and staffing allocated for each phase of SMS development.

KEY STAKEHOLDERS

Accountable Executive:	**Jessica Mefford-Miller** – Chief Executive Officer, Valley Metro
Chief Safety Officer:	**Adrian Ruiz** – Director, Safety, Security, and Quality Assurance, Valley Metro
SMS Implementation Manager:	**Kenneth DeBow** – Manager, Transit Safety, Valley Metro
Key Staff:	**Vacant** – Chief Operations Officer, Valley Metro (formerly Ray Abraham) **Henry Ikwut-Ukwa** – Director, Capital Development, Valley Metro **Penny Lynch** – Director, Human Resources, Valley Metro **Julie Landsburg** – Training Administrator, Valley Metro **Alternate Concepts Inc.** - Transportation Services Contractor

IMPLEMENTATION ACTIVITY BY PHASE

#	Activity	Responsibility	Sample Deliverables	Proposed Implementation Date
Phase 0: Orientation and Familiarization				
0.1	Obtain Executive Commitment	Scott Smith	Signed Safety Management Policy Statement	Complete

#	Activity	Responsibility	Sample Deliverables	Proposed Implementation Date
0.2	Identify SMS Implementation Manager	Adrian Ruiz	Manager, Transit Safety designated as SMS Implementation Manager	Complete
0.3	Conduct SMS orientation and awareness presentations	Adrian Ruiz	Training agendas and sign-in sheets	Q1 2021
0.4	Distribute SMS familiarization documents	Adrian Ruiz	Acknowledgement of receipt forms	Q1 2021
Phase I: Planning, Organization, and Policy Development				
1.1	Develop SMS Implementation Plan	Andrea Crowe	SMS Implementation Plan, Rev. 0	Complete
1.2	Complete SMS implementation gap analysis	Kenneth DeBow	SMS Gap Analysis Report	Complete
1.3	Develop Public Transportation Agency Safety Plan: • Establish Safety Management Policy • Develop blueprint of essential activities of Safety Risk Management • Develop blueprint of essential activities of Safety Assurance • Develop blueprint of essential activities of Safety Promotion	Andrea Crowe	PTASP, Rev 0 (Document titled ASP Rev 2)	Complete
1.4	Complete SMS Workload Assessment • Staffing resources needed based on SMS implementation tasks and level of effort • Timeline for increasing staffing resources	Adrian Ruiz	SMS Workload Assessment Report	Complete
1.5	Complete training needs assessment • Identification of SMS competencies and required training, by position • Program to deliver training in timely and effective manner	Kenneth DeBow Julie Landsburg	Training Needs Assessment Report	Complete

#	Activity	Responsibility	Sample Deliverables	Proposed Implementation Date
1.6	Complete recordkeeping gap analysis	Kenneth DeBow Julie Landsburg	Recordkeeping Assessment Report	Ongoing
1.7	Develop infrastructure for safety management communication throughout the system	Adrian Ruiz	• Intranet • Posters • Emails • Phone Hotlines • Cards • Periodic ASP Refresher training	Ongoing Marketing activities
1.8	Identify sources of data necessary for safety assurance activities	Adrian Ruiz Ray Abraham Henry Ikwut-Ukwa	List / Database of Safety Data Sources	Ongoing
Phase II: Safety Risk Management				
2.1	Initiate resource allocation activities to address staffing needs by department *(Follows Task 1.4)*	Adrian Ruiz	Staffing Plan, Budgetary Process	January 1, 2022 – Ongoing
2.2	Initiate training program to address SMS needs by department *(Follows Task 1.5)*	Kenneth DeBow Julie Landsburg	Training Program Plan	Complete
2.3	Develop procedures and forms to document SMS activities by department *(Follows Task 1.6)*	Kenneth DeBow Julie Landsburg	• SOPs • SMPs • SMS Policies	Complete
2.4	Initiate Safety Management Communication throughout agency *(Follows Task 1.7)*	Adrian Ruiz	• Intranet • Posters • Emails • Phone Hotlines • Cards • Periodic ASP Refresher Training	Ongoing Marketing Activities
2.5	Initiate Employee Safety Reporting Program *(Follows Task 1.7)*	Andrea Crowe	• ESRP Handbook • Anti-Retaliation Policy	Complete
2.6	Initiate safety risk management activities, including identification, assessment, and resolution, for each department *(Follows Tasks 2.2 and 2.3)*	Adrian Ruiz Ray Abraham Penny Lynch Henry Ikwut-Ukwa ACI	• Hazard Management Plan • Accident Investigation Plan • Hazard and event final reports and tracking logs	Complete
2.7	Develop infrastructure for safety performance	Adrian Ruiz Ray Abraham	Safety Data Acquisition and Analysis Group	Complete

#	Activity	Responsibility	Sample Deliverables	Proposed Implementation Date
	monitoring and measurement, including process to receive and analyze data from all sources and establishing performance indicators and targets *(Follows Task 1.8)*			
2.8	Develop infrastructure for management of change, including defining thresholds for engaging in change management activities and ensuring that all departments know and adhere to those requirements	Adrian Ruiz Ray Abraham Henry Ikwut-Ukwa	• Change Management Program • Agency Policies • SSCP • SSMP • Configuration Management Plan	Complete
2.9	Develop infrastructure for continuous improvement, including developing improvement criteria, establishing internal SMS assessments, and process to participate and develop corrective actions from external assessments	Adrian Ruiz Ray Abraham Henry Ikwut-Ukwa	• Internal Safety and Security Audit Program • Corrective Action Plan Program • Business Review Meetings	Complete
2.10	Revise SMS Implementation Plan based on the outcomes of the above activities	Adrian Ruiz	SMS Implementation Plan, Rev. 2	Complete
Phase III: Safety Assurance				
3.1	Initiate safety performance monitoring and measurement activities for each department *(Follows Task 2.7)*	Adrian Ruiz Ray Abraham Henry Ikwut-Ukwa	Trend Analysis Reports CAP Monitoring Logs / IAPP	Ongoing
3.2	Initiate management of change activities for each department *(Follows Task 2.8)*	Adrian Ruiz Ray Abraham Henry Ikwut-Ukwa	• Change Committee Meeting Agendas and Minutes • Change Request Reviews • SSCVRs	Ongoing
3.3	Initiate continuous improvement activities for each department *(Follows Task 2.9)*	Adrian Ruiz Ray Abraham Henry Ikwut-Ukwa	• Internal Audit Reports • Implementation of CAPs from external audits	Ongoing

#	Activity	Responsibility	Sample Deliverables	Proposed Implementation Date
3.4	Continue to monitor workload for SMS to ensure proper allocation of resources *(Follows Task 2.3)*	Adrian Ruiz	Staffing Plan, Rev. 1	Ongoing
3.5	Revise SMS Implementation Plan based on the outcomes of the above activities	Adrian Ruiz	SMS Implementation Plan, Rev. 3	As necessary

Appendix G – Systems and Equipment Preventative Maintenance

Note: Maintenance frequencies are subject to change at any time.

ELEMENT	FREQUENCY	PREVENTATIVE MAINTENANCE	ORGANIZATION PROVIDING MAINTENANCE
Track and Switches			
	Weekly	- Inspect Mainline Track (Twice weekly)	Valley Metro Track Maintenance
	Monthly	- Vacuum Mainline Track - Inspect Yard Track - Inspect Switches, Crossovers, & Turnouts	Valley Metro Track Maintenance
	45 Days	- Grease Switch Components	Valley Metro Track Maintenance
	Every Other Month	- Grease Expansion Joints Lubricate Switch Points	Valley Metro Track Maintenance
	Annually	- Non-destructive testing	Third Party
	Every Other Year	- Bridge Inspection	Third Party
	Severe Weather	- Inspect Track and Right-of-Way	Valley Metro Track Maintenance
Signals and Communications			
	Weekly	- Server Checks	Valley Metro Signals/ Communications
	Monthly	- Switch Obstruction Test - Clean TVM A/C filters - Inspect ECB - Check Signal Cases/Hubs Grounding Integrity - General Housekeeping at Signal Cases/Hubs - Inspect Communication Cabinet Components and Network Functionality - Inspect Grade Crossings - Inspect Mid-Level Switches	Valley Metro Signals/ Communications
	Quarterly	- Power and Manual Switches Obstruction Test, Clean, Lube	Valley Metro Signals/ Communications

ELEMENT	FREQUENCY	PREVENTATIVE MAINTENANCE	ORGANIZATION PROVIDING MAINTENANCE
		- Inspect Grade Crossing Equipment, Flashers, and Gates	
	Annual	- Detailed Grade Crossing Equipment Inspection, Including Timer Relays, Flashers and Signal Hub Functionality	Valley Metro Signals/ Communications
	Two Year	- Test AC Vane Relays	Valley Metro Signals/ Communications
	Four Year	- Test DC Relays, Including Flashers, Gates, Signal Case and Signal Hub	Valley Metro Signals/ Communications
Traction Electrification System			
	Monthly	- Traction Power Substation Inspection	Valley Metro Traction Power
	Semi-annual	- DC Main Circuit Breaker - DC Feeder Circuit Breaker - Dynamic OCS Critical & Test Run Inspection	Valley Metro Traction Power
	Annual	- 12.47KV AC Switchgear - 7SJ62 AC Protective Relay - Auxiliary Power Transformer - Bus Duct - Rectifier Transformer - Thyristor Controlled Rectifier - DC Switchgear Cubicles - DC Negative Disconnect Switch - Detailed OCS Inspection - DC Main Circuit Breaker - DC Protective Relay/Sitras Unit - Batteries - Battery Charger - Annunciator Panel - AC and DC Panelboards - DC Negative Switchgear Cubicle - TCR Filter Units - Impedance Bond Inspections - Detailed OCS Inspection	Valley Metro Traction Power
	Annual	- Stray Current Testing	Third Party
	Five Years	- 12.47kV AC Main Circuit Breaker - DC Negative Switchgear Cubicle	Valley Metro Traction Power

ELEMENT	FREQUENCY	PREVENTATIVE MAINTENANCE	ORGANIZATION PROVIDING MAINTENANCE
Rail Vehicles			
	Daily	- Exterior - Pantograph - Cab - Lighting - Interior - Braking	Valley Metro LRT Vehicle Maintenance
	Monthly	- Daily plus - Carbon strips - Batteries - Roof equipment - Bumper - Coupler - Trucks - Brake pads - Gearbox	Valley Metro LRT Vehicle Maintenance
	Quarterly	- Monthly Plus - Air Compressor - Propulsion - Auxiliary Power Supply - HVAC - Articulation Dampers - Friction Brakes - Track Brakes - Motor Trucks - Center Truck	Valley Metro LRT Vehicle Maintenance
	180 Day	- Quarterly Plus - Articulation Bearing - Flange Lube - Pressure Balancing Valve - Secondary Suspension - Floor Height - Wheel Diameter	Valley Metro LRT Vehicle Maintenance
	1 Year	- 180 Day Plus - Z-Link Bearing - Traction Inverter - Dynamic Brake Resistor - Line Filter Choke - Lightning Arrestor - Electrohydraulic Unit - Brake Accumulator - Brake Pump - Coupler Assembly - Bumper Assembly	Valley Metro LRT Vehicle Maintenance

ELEMENT	FREQUENCY	PREVENTATIVE MAINTENANCE	ORGANIZATION PROVIDING MAINTENANCE
		- Automatic Passenger Counting System	
Operations and Maintenance Center	**Weekly**	General inspection of MOE/MOW Grounds and Equipment - Emergency Generator	DMS
	Monthly	- Air Compressor - Truck Hoists - Paint Booth - HVAC - Coolers - Heavy Equipment inspection (hoists, skyjacks, and lifts)	DMS
	Quarterly	- Fire Systems (Alarms, Risers, Sprinklers)	DMS
	Yearly	- Fire Systems (Alarms, Risers, Sprinklers) - Preventor Backflows - Heavy Equipment (hoists, skyjacks and lifts) certification	DMS
Parking Facilities			
	Bi-Weekly	- Inspect Grounds, lighting, and surfaces - Inspect support facilities (lighting, plumbing, etc.)	DMS
	Monthly	- Inspect HVAC	DMS
Stations			
	Bi-Weekly	- Inspect Lighting, safety, signage, graffiti, vandalism, structure, etc.	DMS

Appendix H -Comprehensive Safety Training Program

PURPOSE

In compliance with 49 CFR 673.29 Valley Metro has established a comprehensive safety training program for all agency employees and contractors directly responsible for safety. Valley Metro conducted a training needs assessment in CY2021 and developed an internal training program titled *Introduction to SMS* which is designed to address gaps in understanding the roles and responsibilities in the Safety Management Systems (SMS) environment.

Key personnel identified in section 9.2.7 of the Agency Safety Plan that are not required to participate in the Public Transportation Certification Training Program curriculum as required by 49 CFR Part 672 must receive introductory SMS training by participating in the Transportation Safety Institute (TSI) SMS Awareness course.

> Regulation: § 673.29 Safety promotion. (a) Competencies and training. A transit agency must establish and implement a comprehensive safety training program for all agency employees and contractors directly responsible for safety in the agency's public transportation system. The training program must include refresher training, as necessary.

SAFETY MANAGEMENT SYSTEM (SMS) TRAINING

In embracing the Safety Management System (SMS) framework to manage risk, Valley Metro has prepared a curriculum to introduce and reinforce the understanding of SMS. The training programs have been tailored to address gaps identified in the 2021 gap analysis. Upon completion of required training, Valley Metro will conduct a gap analysis to assess employee understanding of the SMS framework, and employee responsibility.

COURSE DESCRIPTIONS:

Introduction to SMS:

The in-person introduction to SMS training course has been prepared to meet the training needs of frontline staff. Upon course completion attendees are expected to know the four components of FTA's SMS framework, understand their role in the SMS environment, how to use Valley Metro's Employee Safety Reporting system, and will receive an introduction to Valley Metro's Agency Safety Plan, and the hazard/risk management process.

Transportation Safety Institute - SMS Awareness:

This 1-hour online course will introduce the participant to Safety Management Systems (SMS), describe the four components of FTA's SMS Framework, and identify the importance of Employee Safety Reporting Systems to the success of SMS. Personnel required to participate in the TSI SMS Awareness must attend via the TSI's training portal at https://tsi-dot.csod.com . Login Instructions may be found on page #10 of this document.

SMS TRAINING REQUIREMENTS BY CLASSIFICATION

Executive Leadership

	TSI SMS Awareness	Introduction to SMS
Executive Leadership		
Accountable Executive (CEO)	X	
Director, Capital & Service Development	X	
Director, Human Resources	X	
Director, Government Relations	X	

Facilities Maintenance

	TSI SMS Awareness	Introduction to SMS
Facilities Maintenance		
Manager, Facilities Maintenance	X	
Facilities Maintenance Supervisor	X	
Parts Coordinator		X
Materials Handler		X
Non-Revenue Vehicle Maintenance Coordinator		X
Cleaning Services Coordinator		X

LRV Maintenance

	TSI SMS Awareness	Introduction to SMS
LRV Maintenance		
Deputy Director Maintenance & State of Good Repair	X	
Superintendent, LRV Maintenance	X	
Assistant Superintendent LRV Maintenance	X	
Technical Trainer, LRT Systems	X	
LRT Technical Trainer	X	
LRV Systems & Equipment Specialist		X
LRV Lead Maintenance Technician	X	
Electro-Mechanical Technician		X

	TSI SMS Awareness	Introduction to SMS
LRV Maintenance		
LRV Lead Inspector Cleaner		X
LRV Inspector		X
LRV Cleaners		X

Maintenance of Way

	TSI SMS Awareness	Introduction to SMS
Maintenance of Way		
Deputy Director Maintenance & State of Good Repair	X	
Manager, Maintenance of way	X	
Assistant Manager, Maintenance of Way	X	
Supervisor, Maintenance of Way	X	
Traction Power Systems Technician		X
Communication Systems Technician		X
Track Maintainer		X
Signal Systems Technician		X
Facilities Maintenance Coordinator		X

Operations

	TSI SMS Awareness	Introduction to SMS
Operations		
Deputy Director, Transportation Services and Project Integration	X	
Manager, Rail Operations	X	
Assistant Manager Rail Operations	X	
Track Allocation Program Admin	X	

	TSI SMS Awareness	Introduction to SMS
Operations (Continued)		
ACI – General Manager	X	
ACI – Transportation Superintendent	X	
ACI Manager, Safety & Training	X	
ACI Assistant Manager, Safety & Training	X	
ACI Transportation Coordinator	X	
ACI Field Supervisor	X	
ACI Dispatcher	X	
ACI Line Controller	X	
ACI Operations		X

Safety, Security, and Quality Assurance

	TSI SMS Awareness	Introduction to SMS
SSQA		
Manager, Transit Safety	X	
Rail Transit Safety Specialist	X	
Manager, Transit Security	X	
Transit Security Coordinator	X	

LRV MAINTENANCE & MAINTENANCE OF WAY SAFETY TRAINING

ORIENTATION SAFETY TRAINING

All new employees will receive initial safety training during orientation and prior to the commencement of work activities encompassing the following areas:

- Back Safety
- Emergency Evacuation of the OMC
- Eye Safety
- De-escalation training**
- Fall Protection
- Fire Safety
- FTA Drug & Alcohol
- General Electric Safety
- Hazard Communication Safety Training
- Hearing Conservation
- Introduction to SMS / Agency Safety Plan
- Lockout/Tagout Control of Hazardous Energy
- Personal Protective Equipment (PPE)
- Respiratory Safety/Protection
- Security Awareness
- Slips, trips, and falls
- Workplace Bloodborne Pathogens

Employees whose duties require operation of a non-revenue vehicle will receive training on:

- Driving Safety

**De-escalation training will be introduced in CY2023 as required by §5329(d)(1)(H)

SHOP SPECIFIC SAFETY TRAINING

Additional training is provided to employees consistent with OSHA defined material and in compliance with Valley Metro Standard Operating Procedures. A pre-determined list has been generated indicating training course completion required of employees assigned to the OMC shops, OMC Yards, and all work performed in the field or on the mainline that functions are related to safety, substance abuse and security awareness.

- Blue Flag
- Crane Safety
- Crane Slings & Hoists
- Confined Space
- Driving Safety

- Reasonable Suspicion (Supervisor)
- Electrical Safety (Shop Specific)
- Forklift Safety
- Track Access

Additional training requirements for LRV Maintenance and Maintenance of Way are described in Standard Operating Procedure 100.16 (Valley Metro OMC Training Plan).

TRANSPORTATION CONTRACTOR SAFETY TRAINING – ACI

LRV OPERATORS

New Hire:

All new hire operating personnel/employees will receive 7 weeks of initial training for the Valley Metro (VM) Light Rail alignment and vehicle as well as 1 week of training for the alignment and vehicle for Tempe Streetcar. Training will encompass but not limited to the following areas:

- Track access
- Switches/interlockings
- Signals
- ACI Drug & Alcohol program, policy, and procedures
- Blood Borne Pathogens
- Standard Operating Procedures, Policies & Transportation Rulebook
- Introduction to SMS / Agency Safety Plan (ASP)
- Yard Operations and yard layout
- Mainline Operations and track layout
- Tempe Streetcar alignment
- Vehicles (VM Light Rail and Tempe Streetcar)
- Defensive Operations
- De-escalation training**

**De-escalation training will be introduced in CY2023 as required by §5329(d)(1)(H)

Recertification

Operators will receive recertification training on an annual basis. Recertification training will consist of various topics set for each year by ACI management and may be based on lessons learned, industry standards, trends, Corrective Action Plans (CAP), changes to the alignment be it an expansion or design changes or noted deficiencies. Recertification training may include but not limited to:

- Defensive Operation
- Drug and Alcohol program, policy, and procedures
- ASP / SMS
- Alignment changes or modifications
- Rule Changes or modifications
- Policy, procedure, and SOP review
- Vehicle changes or modifications

LINE CONTROLLERS

New Hire:

All new Line Controllers must obtain LRV Operator certification by participating in the new-hire LRV Operator training program. Line controllers will receive six (6) weeks of training may include but not limited to:

- Supervisory Control and Data Acquisition (SCADA)
- Single Track
- Bus Bridge
- Communications
- Reporting
- Emergency management, Incident Command (NIMS)
- Notification Procedures
- Local Control Panel
- Traction Power
- Standard Operating Procedures
- Fitness for Duty (FFD)
- Reasonable Suspicion
- Restoration of service

  Line Controllers will receive recertification training on an annual basis.

Recertification

Recertification training will consist of various topics set for each year by ACI management and may be based on lessons learned, industry standards, trends, Corrective Action Plans (CAP), changes to the alignment be it an expansion or design changes or noted deficiencies. Recertification training may include but not limited to:

- Defensive Operation
- Drug and Alcohol program, policy, and procedures
- ASP / SMS
- Alignment changes or modifications
- Rule Changes or modifications
- Policy, procedure, and SOP review
- Vehicle changes or modifications
- System changes or modifications

FIELD SUPERVISOR

New Hire:

All new Field Supervisors must obtain LRV Operator certification by participating in the new-hire LRV Operator training program. Line controllers will receive six (6) weeks of training may include but not limited to:

- Rail vehicle troubleshooting
- Emergency response
- Fitness for Duty (FFD)
- Reasonable Suspicion

- Single Track
- Bus Bridge
- Communications
- Reporting
- Emergency management, Incident Command (NIMS)
- Notification Procedures
- Local Control Panel
- Traction Power
- Standard Operating Procedures
- Accident Incident Investigation
- Tablets and Cellphone

Recertification:

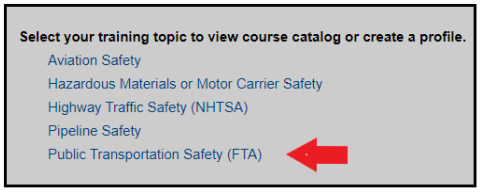
Field Supervisors will receive recertification training on an annual basis.
Recertification training will consist of various topics set for each year by ACI management and may be based on lessons learned, industry standards, trends, Corrective Action Plans (CAP), changes to the alignment be it an expansion or design changes or noted deficiencies. Recertification training may include but not limited to:

- Defensive Operation
- Drug and Alcohol program, policy, and procedures
- ASP / SMS
- Alignment changes or modifications
- Rule Changes or modifications
- Policy, procedure, and SOP review
- Vehicle changes or modifications
- System changes or modification
- Tablets and Cellphone

Additional training requirements for specific workgroups are described in Standard Operating Procedure 100.30 (Transportation Contractor Training).

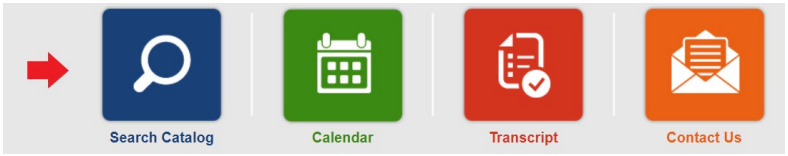
TSI ACCOUNT CREATION INSTRUCTIONS

1. Visit https://tsi-dot.csod.com/
2. Select *Public Transportation Safety (FTA)* by clicking the link. A new page will load.

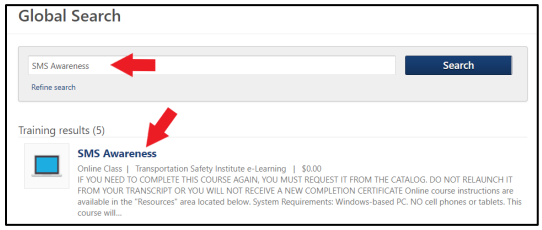


3. Proceed to the top right corner of the TSI landing page. Locate the *Settings* icon located to the right of the *Search* box and select *Register.*

4. Complete the registration and login with credentials.
5. After logging into the TSI platform locate and click *Search Catalog.*



6. When arriving at the global search page, search for *SMS Awareness* and select the online class.



7. Request and launch the course: