**ATTACHMENT B**

# ORANGE COUNTY TRANSPORTATION AUTHORITY

# PUBLIC TRANSPORTATION AGENCY SAFETY PLAN

## 2026

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## EXECUTIVE SUMMARY

Moving Ahead for Progress in the 21st Century (MAP-21) grants the Federal Transit Administration (FTA) the authority to establish and enforce a comprehensive framework to oversee the safety of public transportation throughout the United States. As a component of this safety oversight framework, recipients of FTA Chapter 53 funding are required to develop and implement a Public Transportation Agency Safety Plan (PTASP), Code of Federal Regulation (C.F.R.) 49 Part 673 based on Safety Management Systems (SMS) principles and methods.

On July 19, 2018, the FTA published the PTASP final rule, requiring certain operators of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants to develop safety plans that include the processes and procedures to implement SMS. The goal of SMS is to increase the safety of transit systems by proactively identifying, assessing, and controlling risks. Further, 49 C.F.R. Part 673 puts the FTA and the Orange County Transportation Authority (OCTA) in a position to provide guidance that strengthens the use of safety data to support management decisions, improves the commitment of transit leadership to safety, and fosters a culture of safety promoting awareness and responsiveness to safety risks.

SMS is a comprehensive, collaborative, proactive, and data-driven approach to managing safety, thus bringing management and labor together to better control risk, detect and correct safety issues in a timely manner, effectively share and analyze safety data, and precisely measure safety performance.

***Our Mission*** is to develop and deliver transportation solutions to enhance quality of life and keep Orange County moving.

***Our Vision*** is an integrated and balanced transportation system that supports the diverse travel needs and reflects the character of Orange County.

OCTA is a public agency that conducts its business with integrity, in an honest and ethical manner. Our values consist of safety, integrity, customer focus, can-do spirit, communication, and teamwork/partnership. OCTA keeps people moving by reducing freeway congestion, improving safety and efficiency on our local roads, providing bus service and regional multimodal connections, helping people find ways to leave their vehicles home, and providing safe, convenient transportation that is FTA and Americans with Disabilities Act (ADA) compliant to those with special accommodations. These values shape the way OCTA does business and significantly influence who we are and how we want to be viewed by others.

OCTA has taken steps to create an environment where safety culture is paramount by adopting safety as a core value. Individual efforts alone do not result in the desired outcome. A positive safety culture is achieved only when it develops an aggregate attitude

that safety is paramount in all transit services. This type of safety thinking permits individuals to resist complacency, commit to excellence, and take personal accountability. The cumulative effect of these attitudes develops an organizational attitude of self-regulation for safety. It fosters a universal type of safety mindset. Accordingly, safety culture is both attitudinal, as well as structural, and revolves around the common beliefs and actions of individuals and the organization. It consists not only of identifying safety issues but also of resolving them with appropriate actions.

OCTA is committed to safety as a systematic and comprehensive approach to identifying hazards and risks and has adopted the SMS framework by establishing a safety policy, identifying hazards and controlling risks, setting goals, and planning and measuring performance. OCTA uses SMS as a means of agency-wide support for transit safety by establishing a culture where everyone is accountable for safety. The success of these efforts starts with senior executives and labor leadership visibly demonstrating their commitment to safety and leading by example to resolve safety issues.

The implementation of SMS, as described within this document, has been ongoing at OCTA through the execution of multiple activities, including:

- Extensive hazard identification, analysis, and resolution;
- Increased internal review to ensure our processes are functioning as intended;
- Safety outreach with the community – as good neighbors and partners with emergency management resources in the surrounding communities; and
- Focus on improved safety training for all employees – to ensure that OCTA is as safe as practical with the understanding that safety is everyone's responsibility.

OCTA has developed and adopted this PTASP to comply with FTA regulations. OCTA's Board of Directors (Board), Accountable Executive, and Chief Safety Officer have reviewed and approved the PTASP through (resolution #), assuring its content meets the requirements of 49 C.F.R. Part 673 through the establishment of a comprehensive SMS framework.

## DEFINITIONS

**Source:** All definitions are official U.S. Department of Transportation FTA definitions related to the PTASP.

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

**Accountable Executive:** A single, identifiable person who has ultimate responsibility for carrying out the PTASP 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 PTASP, 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.

**Change Control** - A method of maintaining the consistency and reliability of a system or product's performance, function, and design, and the control of changes made to the system or product throughout its life cycle.

**Change Control Committee -** The Change Control Committee is a group of staff members that represent various areas of expertise within OCTA. These staff members have been selected to be diverse in expertise and responsibility to ensure that all OCTA's interests and objectives are met by each project.

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

**Core Safety Responsibilities:** Responsibilities, accountabilities, and authority of the accountable executive, the key safety officers, and key members of the safety management team.

**Desired Safety Outcomes or Goals:** Safety outcomes for each risk using the measurable safety performance indicators established.

**Document Revision and Control:** A description of the regular annual process used to review and update the plan including a timeline for implementation of the process.

**Event:** Any accident, incident, or occurrence.

**Hazard:** Any real or potential condition that can cause injury, illness, death, damage to or loss of the facilities equipment, rolling stock, or infrastructure, or damage to the environment.

**Hazard Probability:** Likelihood of a hazard consequence to occur.

**Hazard Severity:** The effect/damaging result of a hazards consequence.

**Incident:** 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.

**Injury:** Any damage or harm to persons that requires immediate medical attention away from the scene because of a reportable event. Agencies must report each person transported away from the scene for medical attention classified as an injury, whether or not the person appears to be injured.

**Occurrence:** 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.

**Performance Target:** A quantifiable level of performance or condition expressed as a value for the measure to be achieved within a time period required by the FTA.

**Policy Statement:** A statement establishing senior management commitment to continual safety improvement, signed by the executive accountable for the operation of the agency and the Board.

**Prioritized Safety Risks:** A description of the most serious safety risks to the public, personnel, and property.

**Reportable:** An event occurring on transit right-of-way, in a transit revenue facility, in a transit maintenance facility, or involving a transit revenue vehicle, excluding occupational safety events occurring in administrative buildings.

**Risk:** An assessed probability and severity calculation to classify the overall potential consequences of a hazard.

**Risk Control Strategies and Actions for Prioritized Safety Risks:** A description of risk control strategies and actions the agency will undertake to minimize exposure of the public, personnel, and property to hazards, including a schedule for implementing the risk control strategies and the primary entity responsible for each strategy.

**Safety Assurance:** A list of defined safety performance indicators for each priority risk and associated targets the Agency will use to determine if it is achieving the specified safety goals.

**Safety Culture:** The product of individual and group values, attitudes, competencies and patterns of behavior that determine commitment to safety management. Four attributes of a positive safety culture:

***Reporting*:** encouraging employees to divulge information about hazards that they encounter

***Just*:** rewarding employees for providing essential safety-related information. Participation in Safety Incentive Programs throughout the year gives employees the opportunity to be rewarded for continuous safety improvement participation. Employees may be held accountable for deliberate violations of the rules. Disciplinary measures shall be conducted in accordance with established policies outlined in the OCTA Disciplinary Action Policy.

***Flexible:*** adapting to changing demands and reacting to events

***Learning:*** willing to change based on safety indicators and hazards uncovered through assessments, reviews, data and incidents.

**Safety Performance Target:** A performance target related to safety management activities.

**Safety Risk Management Approach:** The formal processes the agency uses to identify hazards, analyze, and assess safety risks, and develop, implement, and evaluate risk controls.

**Safety Training Program:** A comprehensive safety training program for agency staff that ensures staff are trained and competent to perform their safety duties.

**Serious Injury:** Any injury which: (1) requires hospitalization for more than 48 hours, commencing within seven 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 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.

**Source: NTD Safety and Security Reporting Manual**

**Fatality:** A death or suicide confirmed within 30 days of a reported event. Does not include deaths in or on transit property that are a result of illness or other natural causes; a death due to, collision (including suicides), fire, hazardous material spill, acts of God, system or personal security event (including suicides), and other safety events.

**Source: National Public Transportation Plan Performance Measures**

**Fatalities:** Total number of reportable fatalities and rate per total vehicle revenue miles by mode.

**Injuries:** Total number of reportable injuries and normalized rate per total vehicle revenue miles by mode.

**Safety Events:** Total number of reportable events and rate per total vehicle revenue miles by mode.

**Other Safety Events:** Include but are not limited to slips, trips, falls, smoke, power failure, maintenance-related issues, or electric shock. To be reported as a major event, these events must either meet the fatality, evacuation, or property damage threshold or result in two or more injured persons. Other safety events that cause only one person to be immediately transported from the scene for medical attention, and that do not trigger any other reporting threshold, are reported on the Non-Major Monthly Summary Report form. The FTA includes other safety events that occur in a transit maintenance facility and meet a reporting threshold but continues to exclude occupational safety events occurring in administrative buildings.

***Note:*** *Definitions from the U.S. Department of Transportation, FTA should be applied uniformly across the entire agency, to ensure safety performance measures are accurate agency wide and SMS is applied systematically.*

# 1. INTRODUCTION

OCTA was created in 1991, consolidating the functions of seven separate transportation agencies, including the Orange County Transportation Commission, the Orange County Transit District, the Consolidated Transportation Services Agency, the Orange County Local Transportation Authority, the Orange County Service Authority for Freeway Emergencies, the Orange County Congestion Management Agency, and the Orange County Service Authority for Abandoned Vehicles. OCTA is served by 17 Board Members.

OCTA's 17-member Board consists of five County Supervisors, ten city members, and two public members. The District Director of the California Department of Transportation (Caltrans), District 12, serves as an ex-officio member. The Board of Supervisors are elected by supervisorial districts to a four-year term. City members are appointed by the Orange County City Selection Committee to a two-year term. Public members are appointed by the OCTA Board to a four-year term. Ex-officio member, Caltrans District 12, District Director, is appointed by the Governor to a four-year term Public Utilities Code Section 130052(d).

The Chief Executive Officer (CEO) reports directly to the OCTA Board; the Deputy CEO reports to the CEO and is tasked with the duties of "acting CEO" in the absence of the CEO. The Deputy CEO is also tasked with reporting to the Board in the CEO's absence. The CEO is responsible for the daily management of all systems operated by OCTA and ensures federal, state, local, and agency safety requirements are being met.

***Facilities and Bus Facilities:***

OCTA owns and maintains five maintenance and operating bases, nine transportation centers, one administration location that supports the bus bases and transportation centers, and one rail maintenance service facility. Additionally, there are support facilities, terminals, park-and-ride terminals, employee parking lots, surplus properties, communications, and other miscellaneous locations. The facilities are comprised of 47 buildings and structures totaling over 400,000 square feet. The structures are situated on 80 acres of property throughout Orange County with an initial capital cost of more than $50 million dollars.

The primary physical elements of the OCTA bus system are facilities and buses. The five maintenance and operating bases operate 24 hours per day, seven days a week, 365 days a year. The five bases are as follows:

- Base 1 - Santa Ana
- Base 2 - Irvine Construction Circle (Paratransit)
- Base 4 - Garden Grove
- Base 6 - Anaheim (Contracted Fixed-Route)

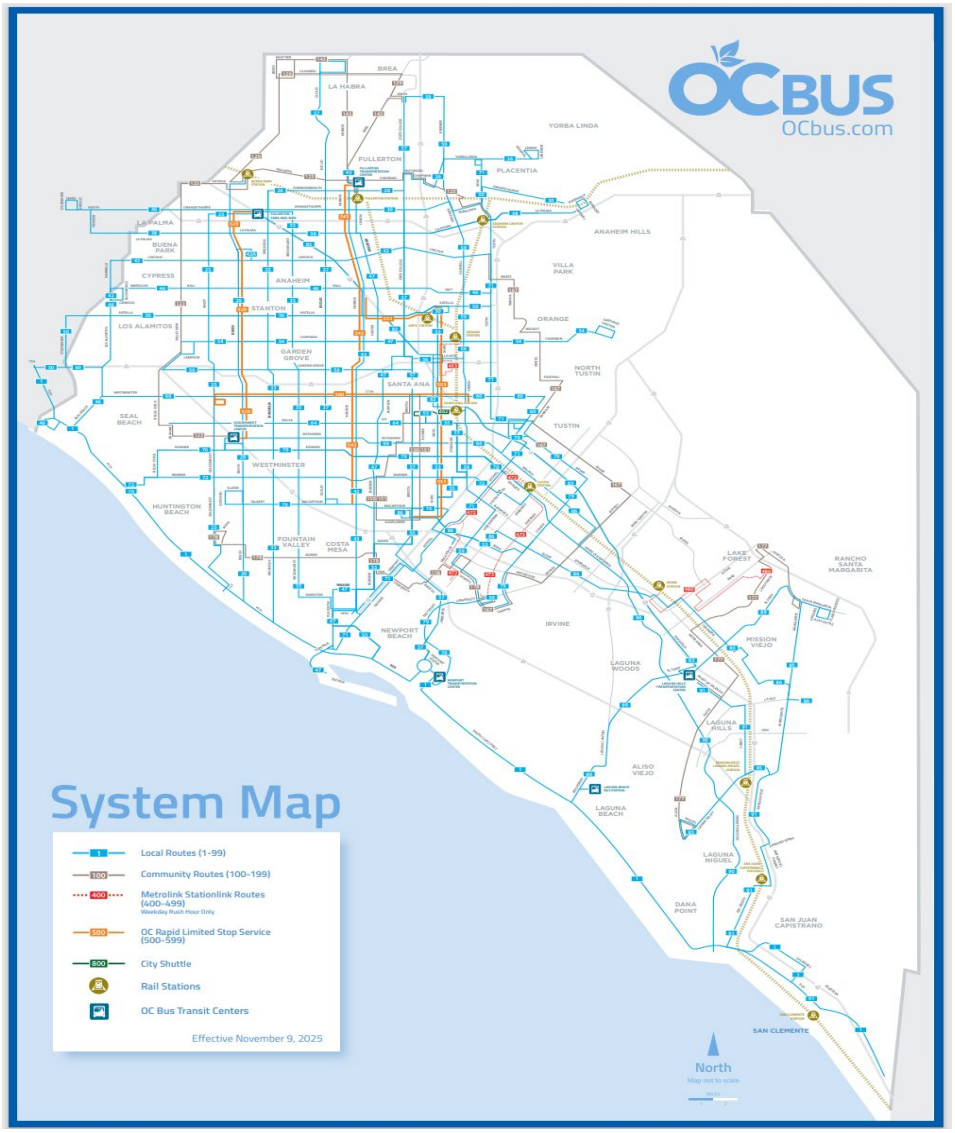
- Base 7 - Irvine Sand Canyon (Contracted Fixed-Route)
- OC Streetcar Maintenance Storage Facility - Santa Ana

### *Bus Service and System Description*

OCTA's bus system operates 58 routes that serve over 5,000 bus stops which operate over a 798 square-mile area in 34 cities and unincorporated areas. OCTA routes include local, rapid, and community routes which travel between cities and Stationlink service that connects Orange County Metrolink stations with major employment centers. Figure 1 depicts the OCTA system map.

**Figure 1**

**THE OCTA SYSTEM MAP**



### *OC Streetcar Service and System Description*

The OC Streetcar is a 4.15-route-mile (8.3-track-mile) modern streetcar line that connects the Santa Ana Regional Transportation Center to Downtown Santa Ana and a new transportation hub located near the intersection of Harbor Boulevard and Westminster Avenue in the City of Garden Grove. The OC Streetcar will also serve the City of Santa Ana, the fourth most densely populated city with a population of over 300,000.

## 2. TRANSIT AGENCY INFORMATION

| | |
|---|---|
| **Transit Agency Name**<br><br>**Transit Agency Address**<br><br>**Name and Title of Accountable Executive** | Orange County Transportation Authority - OCTA<br><br>550 South Main Street<br>Orange, CA 92868<br><br>Darrell E. Johnson, OCTA Chief Executive Officer |
| **Name of Chief Safety Officer or SMS Executive** | Matthew DesRosier |
| **Mode(s) of Service Covered by This Plan** | Bus (Directly Operated and Contracted)<br>Paratransit (Contracted)<br>Streetcar (Contracted)<br><br>List all FTA Funding Types<br>5307, 5309, 5310, 5337, 5339 |
| **Mode(s) of Service Provided by the Transit Agency (Directly operated or contracted service)** | Bus, Vanpool, Demand Response Taxi, Paratransit Services, and Streetcar |
| **Does the Agency Provide Transit Services on Behalf of Another Agency or Entity?** | Yes [X] No [ ]<br><br>Description of Arrangements: OCTA operates ADA service on behalf of the Laguna Beach Trolley, Anaheim Transit Network, Irvine Connect, and Project V community shuttles. |
| **Name and Address of Transit Agency(ies) or Entity(ies) for Which Service Is Provided** | N/A |

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## 3. PLAN DEVELOPMENT, APPROVAL, AND UPDATES

| | | |
|---|---|---|
| **Name of Entity That Drafted This Plan** | Orange County Transportation Authority | |
| | **Original Plan Adoption Date:** May 11, 2020 | |
| | **Signature of Accountable Executive** | **Date of Signature** |
| **Signature by Accountable Executive** | | |
| **Approval by the Board or an Equivalent Authority** | **Name of Individual/Entity That Approved This Plan** | **Date of Approval** |
| | Orange County Transportation Authority Executive Committee<br><br>Orange County Transportation Authority Board of Directors | |
| | **Relevant Documentation (title and location)** | |
| | | |
| | **Name of Individual Entity That Certified This Plan** | **Date of Certification** |
| | Matthew DesRosier, Chief Safety Officer | |
| | Joint Labor Management Safety Committee | 12/29/2025 |

| **Version Number and Updates -** Record history of successive versions of this plan. | | | |
|---|---|---|---|
| **Version Number** | **Section/Pages Affected** | **Reason for Change** | **Date Issued** |
| 2 | 19, 33, 37, 40, 45, 52, 56, 61 | Appendix A, OTS process, configuration process updates | 06/30/2021 |
| 3 | 16, 17, 19, 47 | Annual Review, Managements Commitment, Adjust Miles Between Road Calls data Appendix A | 2/15/2023 |
| 4 | 1 | Date change | 11/22/2024 |
| 4 | 11, 13 | OC Streetcar | 11/22/2024 |
| 4 | 18 | Removal of Beth McCormick as signatory (retired) | 11/22/2024 |
| 4 | 28 | Joint Labor Safety Committee responsibilities | 11/22/2024 |
| 4 | 17, 40, 50 | Joint Labor Management Safety Committee referenced | 11/22/2024 |
| 4 | 49 | Appendix A – 2025 Implementation Actions | 11/22/2024 |
| 4 | 62 | Workplace Violence Policy and Joint Labor Management Safety Committee Policy referenced | 11/22/2024 |
| 4 | 19, 30 | Addition of Rose Casey and Kristin Jacinto | 1/10/2025 |
| 4 | 20, 21 | Safety Performance Targets | 1/16/2025 |
| 5 | 16 | CEO Signature updated with each revision | 11/01/2025 |
| 5 | 39 | Risk-Based Inspection | 11/01/2025 |
| 5 | 19, 33 | Remove Kia Mortazavi | 11/20/2025 |
| 5 | 23 | Safety Performance Targets updated - include Streetcar placeholder | 11/20/2025 |

**Annual Review and Update of the PTASP**

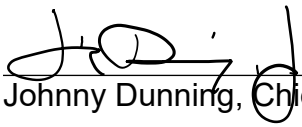
Due to the implementation of 49 CFR Part 673, OCTA is required to annually submit the current PTASP to the Board for review and approval, along with an annual safety report. The annual review of the PTASP will be conducted by the Accountable Executive, the Chief Safety Officer and the SMS Program Manager each calendar year, no later than March 31. No proposed change will be incorporated into the PTASP until it has been reviewed by the Joint Labor Management Safety Committee and approved by the CEO and the Board. Annual review and updating of the PTASP will consist of the CEO submitting it to the Board for review. All changes to the PTASP are recorded in the PTASP Activity Log displaying the version number, section/pages affected, the reason for change, and the date of the change.

Necessary updates outside the annual update will be bulletins, which will be incorporated in the body of the PTASP each year for approval. Any division executive director or other official may submit a proposed change at any time for review and adoption. Proposed changes are submitted to the Chief Safety Officer and a determination is made whether to convene a special SMS/PTASP Committee meeting, or to include the matter on the agenda for the regular SMS/PTASP Committee monthly meeting.

**Management / Executive Commitment**

The individuals signing this PTASP attest all items and conditions contained in this plan are understood, accepted, recommended, and supported; they are committed to the implementation of this PTASP and achieving intended objectives.

Jennifer L Bergener, Deputy Chief Executive Officer, — 4/27/2020 Date



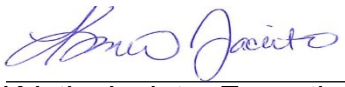
Johnny Dunning, Chief Operations Officer — 11/17/2022 Date

Andrew Oftelie, Chief Financial Officer — 4/24/2020 Date

Maggie McJilton, Executive Director, People and Community Engagement — 4/24/2020 Date

Jim Beil, Executive Director, Capital Programs — 4/24/2020 Date

Rose Casey, Executive Director, Planning — 1/10/2025 Date



Kristin Jacinto, Executive Director, Government Relations

1/10/2025
Date

Matt DesRosier, Manager, Health, Safety & Environmental Compliance, Chief Safety Officer

4/24/2020
Date

## 4. SAFETY PERFORMANCE TARGETS

Safety performance management is a critical tool that supports OCTA in identifying safety concerns and monitoring progress in safety improvements. OCTA has developed the following safety performance targets to focus on its commitment to safety and meet federal requirements.

| NTD | Objective | Metric/Rate | Target |
|---|---|---|---|
| BUS | Reduce Major Events | Per 100K VRM | 0.19 |
| | Reduce Collision Events | Per 100K VRM | 0.14 |
| | Reduce Pedestrians Collisions Events | Per 100K VRM | 0.01 |
| | Reduce Vehicular Collisions Events | Per 100K VRM | 0.12 |
| | Reduce Injuries | Per 100K VRM | 0.35 |
| | Reduce Transit Worker Injuries | Per 100K VRM | 0.02 |
| | Reduce Assaults on Transit Workers | Per 100K VRM | 0.04 |
| | Reduce Fatalities | Per 100K VRM | 0.00 |
| | Transit Worker Fatalities | Per 100K VRM | 0.00 |
| | Maintain System Reliability | Miles between Road Calls | 1 per 14K VRM |

** These targets are based on a three-year rolling average of the data submitted to the National Transit Database (NTD); for all modes of public transportation; OCTA must allocate not less than 0.75 percent of its section 5307 funds to safety-related projects eligible under section 5307 if there is a failure to meet targets.*

** Safety performance targets are calculated on a calendar year basis.*

| NTD | Objective | Metric/Rate | Target |
|---|---|---|---|
| PARATRANSIT | Reduce Major Events | Per 100K VRM | 0.04 |
| | Reduce Collision Events | Per 100K VRM | 0.04 |
| | Reduce Pedestrian Collision Events | Per 100K VRM | 0.00 |
| | Reduce Vehicular Collisions Events | Per 100K VRM | 0.04 |
| | Reduce Injuries | Per 100K VRM | 0.05 |
| | Reduce Transit Worker Injuries | Per 100K VRM | 0.00 |
| | Reduce Assaults on Transit Workers | Per 100K VRM | 0.00 |
| | Reduce Fatalities | Per 100K VRM | 0.00 |
| | Transit Worker Fatalities | Per 100K VRM | 0.00 |
| | Maintain System Reliability | Miles between Road Calls | 1 per 25K VRM |

** These targets are based on a three-year rolling average of the data submitted to the National Transit Database (NTD); for all modes of public transportation; OCTA must allocate not less than 0.75 percent of its section 5307 funds to safety-related projects eligible under section 5307 if there is a failure to meet targets.*

** Safety performance targets are calculated on a calendar year basis.*

| NTD | Objective | Metric/Rate | Target |
|---|---|---|---|
| STREETCAR | Reduce Major Events | Per 100K VRM | TBD |
| | Reduce Collision Events | Per 100K VRM | TBD |
| | Reduce Pedestrian Collision Events | Per 100K VRM | TBD |
| | Reduce Vehicular Collisions Events | Per 100K VRM | TBD |
| | Reduce Injuries | Per 100K VRM | TBD |
| | Reduce Transit Worker Injuries | Per 100K VRM | TBD |
| | Reduce Assaults on Transit Workers | Per 100K VRM | TBD |
| | Reduce Fatalities | Per 100K VRM | TBD |
| | Transit Worker Fatalities | Per 100K VRM | TBD |
| | Maintain System Reliability | Miles between Road Calls | TBD |

| **Safety Performance Target Coordination**<br>Describe the coordination with the State and Metropolitan Planning Organization(s) (MPO) in the selection of State and MPO safety performance targets | | |
|---|---|---|
| OCTA will foster agency-wide support for transit safety and will provide copies of their PTASP and additional information as requested to Southern California Association of Governments (SCAG) and California Public Utilities Commission (CPUC). Additionally, OCTA will evaluate agency Safety Performance Targets annually; the updated targets will be shared with the SCAG, and CPUC. | | |
| Targets Transmitted to the State | State Entity Name | Date Targets Transmitted |
| | CPUC | |
| Targets Transmitted to the Metropolitan Planning Organization(s) | Metropolitan Planning Organization Name | Date Targets Transmitted |
| | SCAG | |

**Represented safety targets are benchmarked against similar streetcar/light rail transit agencies and are not intended to reflect the performance of the OC Streetcar. Actual performance metrics will be developed once sufficient historical data from the OC Streetcar becomes available.*

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# 5. SAFETY MANAGEMENT POLICY (673.23)

## 5.1 Safety Management Policy Statement - 673.23 (a)

OCTA is committed to developing, implementing, maintaining, and constantly improving processes to make sure all transit service delivery activities take place under a balanced allocation of organizational resources, aimed at achieving the highest level of safety performance and meeting standards. All levels of management and employees are accountable for the delivery of the highest level of safety performance, starting with the OCTA CEO.

OCTA managers, personnel, and outside contractors are responsible for promoting the safety of customers, employees, property, and the public who encounter OCTA's transit services. Every employee must practice workplace safety, use equipment, tools, and materials properly, and be trained in the work rules and procedures for their area of responsibility, including contingency plans for abnormal and emergency conditions. Each employee and contractor shall take an active part in the hazard identification and reporting process.

OCTA commitment is to:

- Support the management of safety through the provision of appropriate resources to 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 paid to other management systems of the organization;
- Integrate the management of safety as a primary responsibility of all managers and employees;
- Clearly define for all staff, managers, and employees alike, their accountability and responsibility for the delivery of the organization's safety performance and the overall performance of OCTA's 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. Eliminate or mitigate safety risks and hazardous consequences resulting from OCTA's operations or activities to a level that is acceptable and consistent with safety performance;
- Ensure no action will be taken against any employee who discloses a safety concern through the employee safety reporting program, unless disclosure indicates 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 sufficiently skilled and trained PACE staff are available to implement safety management processes;
- Ensure 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 OCTA's safety performance against realistic and data driven safety performance indicators and safety performance targets;
- Continually improve OCTA's safety performance through management processes that ensure appropriate safety management action is taken and is effective; and
- Ensure externally supplied systems and services to support OCTA's operations are delivered to meet OCTA's safety performance standards.

## 5.2 Process for Reporting Unsafe Conditions-673.23(b)

Employees are required to embrace OCTA's safety goals and objectives and encouraged to report safety concerns, issues, or hazards. OCTA's employees have a duty to report any unsafe conditions to their supervisor, manager, union steward, safety committee member, safety staff, the Accountable Executive, or the SMS Program Manager. The safety staff works with managers and employees to facilitate the reporting of hazards using email, telephone, and in-person reporting. Moreover, employees may report safety concerns, issues, or hazards through the safety department intranet page, Ri2, and Ethicspoint, OCTA's ethics hotline.

### OCTA Health, Safety & Environmental Compliance Intranet Page

The OCTA intranet homepage provides employees with links to the intranet pages for each division in the agency. By selecting "Organization" on the main menu bar and then scrolling to the appropriate division, employees have access to the that division's intranet page. On the Health, Safety and Environmental Compliance page, employees may use the "Big Red Button" to submit a safety concern or get access to safety policies and information. The reporting of unsafe conditions through the "Big Red Button" are managed by the CSO and is a closed loop process that is resolved within 14 business days.

The Routes Issues and Information Reporting Program (Ri2) affords OCTA coach operators the ability to enter information related to safety concerns, issues, or hazards into an electronic risk forum. OCTA responds to Ri2 submissions and typically resolves the report within 14 business days. During the resolution process, coach operators have the ability to log in and check the progress or status of their Ri2 submission.

OCTA's Ethicspoint number is available for any employee, outside contractor, or member of the public to anonymously report any safety hazards, suspected fraud, waste, abuse, illegal or unethical behavior. The report is confidential. Reports to Ethicspoint will be administered by the Internal Audit Department for review and investigation by the appropriate department.

OCTA is committed to fair treatment of all its employees and recognizes its responsibility under state and federal law to protect from punishment and harassment, any person who reports an issue, whether the allegation is found to have merit. OCTA shall not take any action or threaten any action against any employee as a reprisal for making a report unless the report was made, or the information was disclosed with the knowledge that it was false or with willful disregard for its truth or falsity. Policy violations will be managed through OCTA's Human Resources Department.

## 5.3 Safety Management Policy Communication-673.23(c)

OCTA staff is informed of their responsibilities related to safety and SMS during onboarding, within their individual job descriptions, and receive an annual performance evaluation that includes safety related evaluation criteria. Additionally, each employee is required to acknowledge through signature that they have received a written copy of OCTA's Safety Management Policy Statement. Signed copies will be filed within individual employee files. OCTA will provide additional safety information via the intranet, newsletters, safety bulletins, and audio-visual monitors in break rooms.

## 5.4 Authorities, Accountabilities, and Responsibilities-673.23(d)

The purpose of the PTASP is to maintain a formal safety program and establish a coordinated safety effort responsive to the needs of the operating and support departments, and make sure all personnel and contractors are working toward the common goal of minimizing the occurrence of customer and employee incidents by providing safe revenue service to our customers and a safe work environment for our employees.

### *Board of Directors*

The 17-member Board receives staff reports and considers staff recommendations that have the potential to impact operational safety. The Board makes policy-level decisions and follows established protocol for voting on actions that guide OCTA's operations. OCTA Board Members also serve on smaller committees, which are intended to provide more detailed information and specifically focus on different functional areas of OCTA. The various Board committees that review and recommend actions that have potential safety and environmental impacts include the Executive Committee, which safety related items are brought before, the Legislative and Communications Committee, the Regional Planning and Highways Committee, and the Transit Committee.

### *Executive Staff*

Executive staff refers to the CEO, Deputy CEO, Chief Financial Officer, Chief Operating Officer (COO), Division Executive Directors, and Division Directors. The CEO is the OCTA Accountable Executive and reports directly to the Board; the Deputy CEO reports to the CEO and is tasked with the duties of "acting CEO" in the absence of the CEO. The Deputy CEO is also tasked with reporting to the Board in the CEO's absence. The CEO

is responsible for the daily management of all systems operated by OCTA and ensures federal, state, local, and agency safety requirements are being met. CSO and executive staff directs the utilization of available resources as necessary to achieve safety goals and objectives. This management level exercises approval authority for major system modifications and facilitates coordination of safety efforts.

***Divisions/Departments***

The People and Community Engagement (PACE) Division, led by the Executive Director of PACE, is responsible for planning, directing, and evaluating the effectiveness of all the PACE Division systems, policies, and practices, as well as related administrative functions. PACE includes the Marketing and Public Outreach Departments, which are responsible for the marketing and public outreach programs in support of OCTA projects, services, and initiatives. Additionally, PACE includes the Human Resources Department, which includes Labor and Employee Relations, Equal Employment Opportunity/ Affirmative Action, ADA general program and Title VI, Learning and Development Department, Risk Management Department, and Health, Safety and Environmental Compliance Department.

The Operations Division, led by the COO, is responsible for all operational functions in the authority: bus, streetcar, rail, and paratransit. Operations provides highly complex and responsible direction for multiple transit departments and administrative programs. Operations is also responsible for creating policy and strategic direction as well as planning the operational functions of the agency.

The Planning Division, led by the Executive Director of Planning, is responsible for ensuring the coordination of activities and integration of effort, overseeing, evaluating, and managing the work of agency staff and contractors conducting the strategic planning, policy development, environmental studies, design, and community relations activities to deliver highly complex multimodal transportation planning. Planning is also responsible for creating policy and strategic direction as well as planning, directing, and evaluating the effectiveness of all Planning Division's systems, policies and practices, and related functions.

The Finance and Administration Division, led by the Chief Financial Officer, is responsible for the direction of the overall programs/activities of the Treasury Department, Contracts Administration and Materials Management, Accounting and Financial Reporting, Financial Planning and Analysis, General Services, and leads the Finance and Information Systems.

The Capital Programs Division, led by the Executive Director of Capital Programs, is responsible for the oversight, evaluation, and management of the division's activities to deliver highly complex multimodal transportation rail, high-speed rail, and highway programs. The division is also responsible for creating policy and strategic direction as well as planning, directing, delivering, and evaluating the effectiveness of all division systems, policies and practices, and related functions.

The Government Relations Division, led by the Executive Director of Government Relations, is comprised of State and Federal Relations, a Grants section, and the Regional Initiatives Department. The Government Relations Division is responsible for monitoring, analyzing, and responding to government actions and decisions that affect how OCTA receives funding, plans for projects, and delivery of services. Government Relations also maintains an active presence at all levels of government to ensure OCTA's interests are well represented in these various forums.

***Staff Positions***

**Directors, Managers Roles, and Responsibilities**

All directors and managers are accountable and responsible for:

- Implementing the safety risk management, safety assurance, and safety training and communication protocols of their department;
- Safety performance within their functional areas;
- Ensuring procedures are consistent with the SMS;
- Determining and implementing countermeasures required to counteract safety risks and manage issues that negatively impact OCTA safety performance;
- Ensuring that all employees are trained in SMS;
- Supporting and requiring employees within their department to participate in safety training activities;
- Integrating SRM into existing processes;
- Requiring that all relevant safety information is communicated and used in decision making;
- Providing information to the CEO, COO, Executive Directors, and Health, Safety, and Environmental Compliance, as appropriate;
- Ensuring that all system changes are coordinated with HSEC and documented; and
- Cooperating with and providing support for evaluations and reviews conducted by HSEC.

**Supervisor Roles and Responsibilities**

Supervisors are accountable and responsible for:

- The safety performance of all personnel and equipment under their supervision;
- Implementing and maintaining safety-related control measures/mitigations;
- Familiarizing employees with the safety requirements and hazards associated with the work to be performed;
- Responding to identified hazards that may impact safety performance;
- Reporting all mishaps and incidents to HSEC;
- Sharing lessons learned from incidents; and
- Implementing and adhering to SMS procedures and processes within their span of control.

**Employee Responsibilities**
All OCTA employees are responsible for:

- Becoming familiar with the safety procedures for their assigned work activity;
- Performing their work safely;
- Following procedures and rules;
- Calling attention to hazards that may impact safety performance; and
- Reporting mishaps and incidents to their supervisor, in accordance with established requirements for the protection of themselves, co-workers, customers, facilities, and equipment.

**Joint Labor Management Safety Committee**
The committee must consist of an equal number of frontline employee representatives, selected by a labor organization representing the plurality of the frontline workforce or a contractor to the recipient, to the extent frontline employees are represented by labor organizations, and management representatives.
(Reference PACE-HSEC-480.11JOINT, Joint Labor-Management Safety Committee Policy)

The Safety Committee is responsible for:

- Identifying and recommending risk-based mitigations or strategies necessary to reduce the likelihood and severity of consequences identified through the agency's safety risk assessment;
- Identifying mitigations or strategies that may be ineffective, inappropriate, or were not implemented as intended;
- Identifying safety deficiencies for purposes of continuous improvement;
- Setting annual safety performance targets for the safety risk reduction program; and
- Reviewing and approving any updates of the PTASP.

***Contractors***

OCTA is responsible for facilitating communication between internal stakeholders and outside contractors. All contractors are responsible for compliance with this PTASP and 49 CFR Part 673. The contractor is responsible for collecting, reviewing for accuracy, and submitting contract/performance-related information and data to OCTA Operations Management monthly. The contractor is required to comply with all OCTA SMS policies and procedures, reporting and submission requirements, including those required for hazard identification and analysis, the NTD submission, and preparing all required data for OCTA to report. OCTA's SMS Program Manager will receive SMS data from OCTA contractors, according to the agreed upon schedule, monitor and measure the

contractor's safety performance through the data provided, and report to the CSO and the PTASP SMS Committee quarterly.

Additionally, the contractor must provide OCTA access to all work, materials, payroll, and other data, records, and accounts maintained by the contractor for reviewing purposes. Any review findings requiring corrective action must be corrected by the contractor and checked by OCTA to ensure they have been corrected.

Contractors are required to provide training to employees on a scheduled basis, which includes refresher training. The contractor is required to make sure that their staff receives training applicable to requirements of jobs performed. Training is related to knowledge and operation of equipment, dealing with the public, sensitivity to persons with disabilities, knowledge of various kinds of disabilities, rules and procedures of OCTA services, and other areas of knowledge and proficiency which shall enable personnel to perform their jobs and meet the requirements of the contract. OCTA reserves the right to review training activities at its discretion.

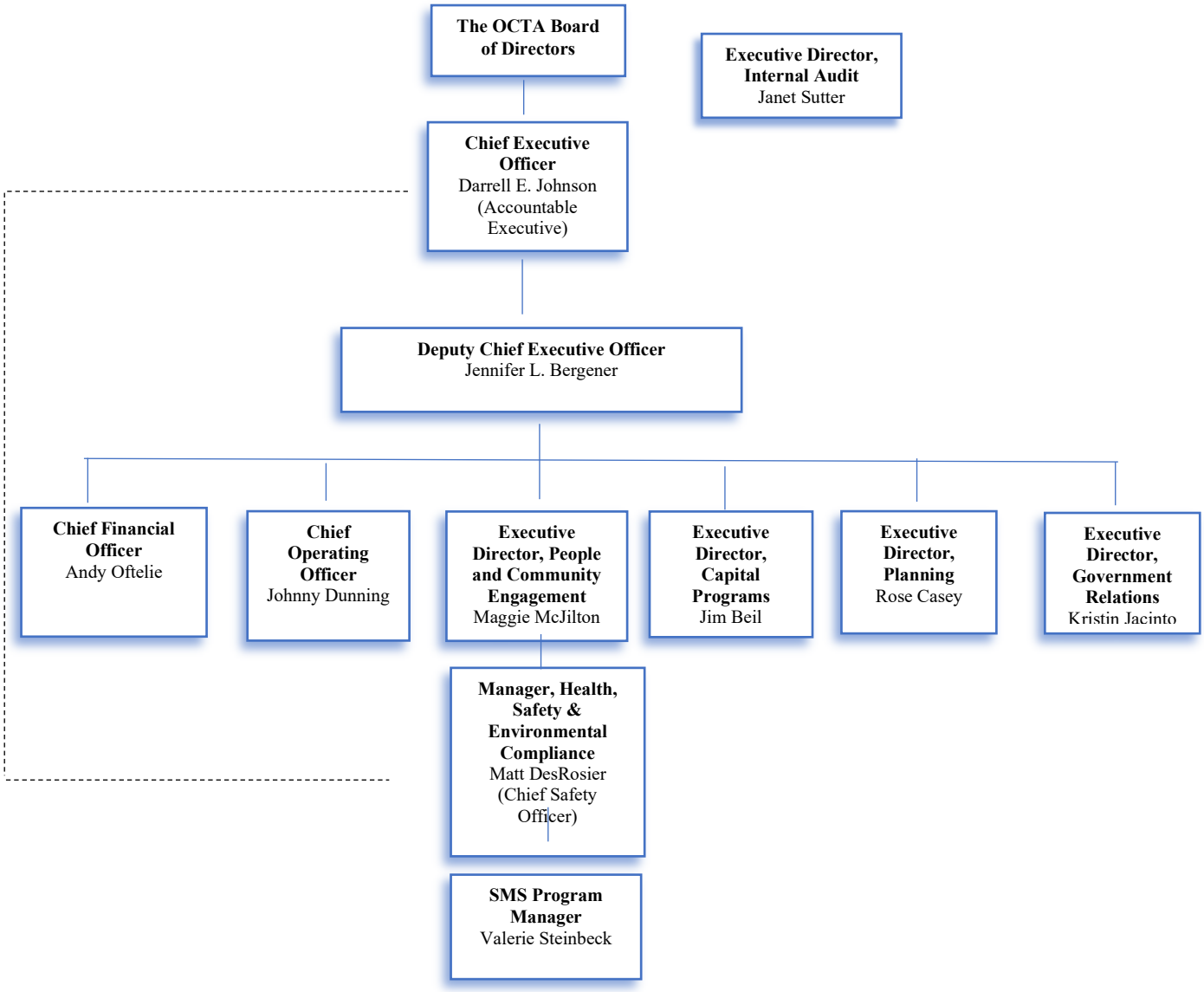
***Lines of Authority for Safety:***

The HSEC Department, led by the HSEC Manager/CSO, reports directly to the CEO through a dotted line and reports administratively daily to the Executive Director of PACE. The HSEC Manager/CSO, is responsible for the development, implementation, and administration of environmental, health, and safety, procedures, and programs designed to ensure regulatory compliance, minimize hazards, and promote a culture of safety. Provides leadership, technical expertise, and strategic planning for implementing employee safety programs, fleet and construction safety, and environmental compliance. HSEC assists all departments in maintaining a safe and secure environment by providing guidance in identifying and evaluating hazards and vulnerabilities and minimizing the hazardous conditions and/or vulnerabilities to their lowest achievable level.

The CSO oversees SMS, the SMS Program Manager, and is the chair of the SMS/PTASP Committee(s). The HSEC Department consists of a CSO, SMS Program Manager, and safety staff to achieve its safety responsibilities as outlined in this document.

**Figure 2**

## Executive Management Reporting



### *Chief Safety Officer (CSO)*

The CSO takes a proactive approach by performing the following activities:

- Manages and implements the PTASP, as well as answers any questions regarding the agency's Transit Safety Plan;
- Chairs the SMS/PTASP Committee meetings;
- Leads OCTA in the implementation of the Safety Management System throughout the agency;
- Participates in formal meetings with the FTA, CEO, and other OCTA management on safety issues;
- Reports safety performance measures/targets to the MPO; and
- Develops and implements safety policies, procedures, and programs risk identification, evaluation, control, funding, and administration.

### *SMS Program Manager*

Assists the CSO in all functions and takes the lead in the following safety functions:

- Co-chairs the SMS/PTASP Committee meetings;
- Promotes and coordinates the Safety Management System methodology within the agency;
- Participates in formal meetings with the FTA, CEO, and other management on safety issues;
- Investigates employee and vehicle accidents, incidents, and injuries; assists in developing programs to reduce injuries;
- Serves as OCTA's main contact with other agencies related to safety programs and procedures and prepares case records, documents, and data required by such agencies;
- Compiles and analyzes safety statistics; produces reports, records, documents, and manifests; accesses and updates database files;
- Coordinates staff safety meetings and attends meetings, conferences, and group functions related to safety;
- Conducts training sessions relating to safety;
- Identifies health and safety concerns, analyzes reports and information, develops programs for accident/injury prevention, and submits recommendations to reduce frequency of accidents;
- Identifies safety concerns and issues, and participates in the design and implementation of safety policies and procedures;
- Performs hazard analyses as necessary;
- Tracks hazards and corrective actions; and
- Performs other job-related duties, as directed.

To ensure transit operations are conducted in the safest manner possible, all appropriate personnel have been assigned safety and SMS-related responsibilities, Table 1: Safety

Roles and SMS Responsibilities. In addition, within OCTA, each department/function provides distinct roles and carries out specific responsibilities to ensure the safety of passengers, employees, local responders, and the community served.

## Safety Task Roles and Responsibilities

| SAFETY TASKS | SSO | Accountable Executive / Executive Dept. | Operations Management | Safety | Security and EP | Finance / CAMM | TTS / Engineering | PACE / Risk Management | Planning & Development | Internal Audit | D-Daily M-Monthly Q-Quarterly Y-Yearly AR-As Required |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Safety Management Policy Statement | A | P | P | P | S | S | S | S | S | S | AR |
| Develop PTASP | A | P | P | P | RC | RC | RC | RC | RC | RC | AR |
| Update PTASP | A | P | P | P | RC | RC | RC | RC | RC | RC | AR |
| Liaison with State Safety Oversight | N/A | S | S | P | S | S | S | S | S | S | AR |
| External PTASP Reviews | P | S | S | P | S | S | S | S | S | S | AR |
| Conduct Internal Safety Assessment/Reviews | A | A | S | P | S | S | S | S | S | P | Y |
| Internal Safety Reporting and Program Monitoring | A | S | S | P | S | S | S | S | S | S | AR |
| Safety/Security Certification | RC | A | P | P | P | S | P | S | S | S | AR |
| Develop Emergency Response Plans | A | A | S | S | P | S | S | S | S | S | Y |
| Safety Hazard, Near-Miss, and Incident Identification and Reporting | RC | P | P | P | P | P | P | P | P | P | AR |
| Collect and analyze all safety data and measurements | RC | S | P | P | S | S | S | S | S | S | AR |
| Collect and analyze all security data and measurements | RC | S | P | S | P | S | S | S | S | S | D |
| Maintain database of safety statistics, measurements, trends | RC | S | P | P | S | S | S | S | S | S | D |
| Maintain database of security statistics, measurements, trends | RC | S | P | S | P | S | S | S | S | S | D |
| Issue Accident/Incident Statistics and Reports | A | S | S | P | P | S | S | S | S | S | D |
| Review Passenger Accident Trends | RC | S | P | S | S | S | S | S | S | S | M |
| Conduct Accident/Incident Investigations | A | A | P | P | P | S | S | S | S | S | AR |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Report required threshold Accidents to Outside Agencies (SSO, FTA) | A | A | P | P | S | S | S | S | S | S | AR |
| Safety Risk Assessments | RC | A | P | P | P | P | P | S | P | S | AR |
| Hazard/Risk Management and Mitigations | A | S | P | P | P | S | P | S | P | S | AR |
| Design Reviews | RC | S | P | P | P | S | P | S | P | S | AR |
| Change Control | N/A | S | P | S | S | S | P | S | S | S | AR |
| Safety Training Program | RC | A | P | P | S | S | S | S | S | S | AR |
| Security Training Program | RC | A | P | S | P | S | S | S | S | S | AR |
| Safety Communication | RC | S | P | P | P | S | P | S | S | S | AR |
| Occupational Safety and Health Program Compliance | RC | P | P | P | S | S | S | S | S | S | AR |
| Security and Emergency Response Program Compliance | RC | P | P | P | P | S | S | S | S | S | AR |
| Maintain accident record keeping, employee injury reporting forms, and related data | RC | S | S | P | S | S | S | S | S | S | AR |
| Provide claims administration and investigation | RC | S | S | S | S | S | S | P | S | S | D |
| CAPs | A | S | P | P | P | S | P | S | S | S | D |
| Contractor Oversight and Compliance Assurance | RC | S | S | P | S | S | S | S | S | S | AR |
| PTASP Documentation Control | RC | S | S | P | S | S | S | S | S | S | AR |

Legend:

| | | |
|---|---|---|
| **A** | **Approval** | The identified participant(s) is (are) responsible for approval of specified documentation |
| **P** | **Primary Task Responsibility** | The identified participant(s) is (are) responsible for the preparation of the specified documentation. |
| **S** | **Secondary or Support Task Responsibility** | The identified participant(s) is (are) to provide the necessary support to accomplish and document the task. |
| **RC** | **Review and Comment Responsibility** | The identified participant(s) may review and provide comments on the task or requirement. |

# 6. SAFETY RISK MANAGEMENT (673.25)

## 6.1 Safety Risk Management Process 673.25(a)

Safety Risk Management promotes the identification of hazards before they escalate into accidents or incidents, assesses safety risk, and establishes necessary mitigations. The Safety Risk Management process is comprised of the following activities: safety hazard identification, safety risk assessment, and safety risk mitigation.

## 6.2 Safety Hazard Identification 673.25(b)

Hazard identification and resolution is a core element of the PTASP/SMS, emphasizing timely correction of unsafe conditions, anticipated and reconciled before serious accident, injury, or damage occurs. OCTA has the following hazard identification sources in place:

- Employee safety reporting;
- Safety observations;
- Inspections;
- Internal reviews;
- Internal safety investigations;
- Accident reports;
- Compliance programs;
- PTASP/SMS committee reviews;
- SMS data/Industry data;
- State and federal government sources (including CPUC and FTA); and
- Public feedback/complaints.

The objective of hazard identification and analysis is to identify and define as many hazardous conditions as possible and enter them into the hazard resolution process before those conditions or associated actions cause or contribute to an accident. Hazard identification is accomplished through on-site hazard identification, hazard reporting, and/or as each department or base manager collects and analyzes data to monitor trends. Departmental and base managers are responsible for investigating hazards and resolving such hazards within their departments utilizing the hazard management process identification/analysis delineated in Appendix A. When hazards cannot be resolved within the department, the Safety Department, CSO, and Accountable Executive are consulted for resolution.

Data gathered within each department is used to set the agenda for PTASP/SMS Committee meetings, where hazard data is discussed, evaluated, and disseminated to each representative departmental manager for use interdepartmentally and agency wide. The SMS Program Manager is responsible for preparing monthly data and trend analysis reports which are reviewed at monthly PTASP/SMS Committee meetings. The monthly report(s) are distributed throughout OCTA as part of safety promotion/communication strategies.

OCTA documents hazards that develop through multiple sources, such as employee reporting, accidents, incidents, leading or lagging indicators. OCTA also evaluates hazards to determine if multiple events occurred leading up to an event. This ensures each possible cause is evaluated and documented for trending purposes.

## 6.3 Safety Risk Assessment 673.25(c)

OCTA's hazard analysis process establishes processes to assess the safety risks associated with identified hazards. The process assesses the safety risk based upon predicted probability and severity of a hazard's potential consequences.

The probability that a hazard will occur during the planned life expectancy of the system element, subsystem, or component can be described subjectively in potential occurrences per unit of time, event, population, items, or activity. Supporting rationale for assigning a hazard probability are documented in hazard analysis reports.

The severity of a hazard is defined to provide a qualitative measure of the worst credible mishap resulting from operational risks, personnel error, environmental conditions, design inadequacies, and procedural deficiencies for a system, subsystem, or component failure or malfunction.

### Safety Risk Assessment Request Process

The process allows OCTA employees to submit safety concerns, as a non-punitive safety reporting system. Hazards that are deemed by Operations and/or HSEC to be an immediate threat to safety, for example poor footing in walking areas, are expected to be immediately corrected. The process is as follows:

1. Employee reports hazards to supervisor/manager, safety committee member or union steward, or employee can enter a request through the safety department intranet site, Ri2, or Ethicspoint.
2. Report entered into and tracked in ORIGAMI
   a. Once entered into the database, a tracking number is assigned, and a notification is sent to the requestor via email.
   b. Primary Safety staff notified via email, reviewed for complete information, and route assignments; post updates as progress is made.
3. Review of issues – issues reviewed by Safety and other experts as needed.
4. Conclusions and actions to be taken – conclusions of the review guide follow-up actions to be taken.
5. Response to the requestor – primary Safety staff sends written report to conclusions and actions taken, once determined and completed.

## 6.4 Safety Risk Mitigation 673.25(d)

Hazards which cannot be eliminated are mitigated through engineering controls, administrative controls, or personal protective equipment. Hazards that pose an imminent

danger are expected to be immediately mitigated through the organization's stop work authority.

The Accountable Executive and the CSO have authority to implement operational changes that have safety implications. Accordingly, all hazard identification and analysis proceedings should result in the issuance of a report by the SMS Program Manager to the CSO. The report includes all pertinent data developed by the PTASP/SMS Committee on the identified hazard and risk evaluation process. A recommendation achieved by consensus of the committee is included, regardless of whether the recommendation is for a change in existing conditions or procedures, or for retention of the existing condition/risk. Any disagreement on the matter, or suggested negative ramifications of the recommendation, must also be included for review and consideration by the Accountable Executive.

The PTASP/SMS Committee Chair (CSO) discusses reports with the Accountable Executive; if required, the CSO will direct the SMS Program Manager to prepare a report based on the Accountable Executive's response to the recommendation, including all necessary data pertaining to the decision. If deemed necessary, the appropriate department will be directed to arrange any necessary field testing, pilot program, or controlled environment for developing additional information. Such testing may be requested by the Accountable Executive, CSO or the PTASP/SMS Committee and documented.

Hazards identified within the system are evaluated by appropriate staff and eliminated or mitigated to an acceptable level. The hazard analysis process has been developed to ensure the optimum level of safety is achieved through the expeditious resolution of hazards. In the event the hazard has been categorized as UNACCEPTABLE, the CSO is responsible for maintaining the necessary information, notifications, and CAPs. Figure 3, Risk Assessment Flow Diagram displays the risk assessment cycle.

## 6.5 Risk Based Safety Inspection Program 673.11(a)(6)(iii)

The Rail Transit Agency (RTA) must provide the SSOA with the data the RTA collects when identifying hazards and assessing and mitigating safety risks.

CPUC State Safety Oversight Agency Risk-Based Inspections

The CPUC has safety and security regulatory authority over all rail transit and other public transit fixed-guideway systems (referred to as RTAs) under Public Utilities Code Section 99152 and other California statutes.

The CPUC's SSO program is approved and certified by the FTA in accordance with the requirements of federal public transportation safety program law (49 United States Code §5329) and FTA's SSO regulation (49 Code of Federal Regulation Part 674).

The CPUC's Rail Transit Safety Branch (RTSB) implements its SSO program and focuses on verification of compliance with the PTASP, System Security Plan, Safety Certification

Plans, and other plans and procedures of the RTA to ensure that these plans meet all state and federal rules and regulations, and that RTAs are effectively implementing those plans and the RTA's adopted policies and procedures.

Under state laws and regulations, and federal regulations, CPUC has the authority to make announced (with advanced notice) and unannounced (without advance notice) inspections of all RTA activities, including infrastructure, equipment, records, personnel, and data.

Under the FTA Special Directive 22-25 issued to the CPUC, the CPUC RTSB has developed a Risk-Based Inspection Program and upon FTA approval will implement that program. Under the Special Directive requirements, the RTA must provide the State Safety Oversight Agency (SSOA) with the data the RTA collects when identifying hazards and assessing and mitigating safety risk**.** The RTSB has set forth the requirements for its RBI Program in the RTSB Program Standard Procedures Manual. The Special Directive requires that the CPUC acquire RTA safety, inspection, and maintenance data to analyze and review for any identifiable trends or findings to "inform" the prioritization of CPUC inspections.

As such, RTSB has met and consulted with each RTA regarding the specific records RTSB seeks to routinely acquire from the RTA as part of this process, and the frequency of RTA submittals of that information. RTSB has identified the records sets and the process for transmittal of the data and records to CPUC via a special mailbox (RBIdata@cpuc.ca.gov). Other data transfer methodologies may also be used such as SharePoint sites or file transfer protocol systems.

During those meetings with the RTAs, RTSB discussed with the RTAs:

- Protocols to be employed for both announced and unannounced inspections, including arranging announced inspections and expectation for accessing the RTA facilities for both announced and unannounced inspections;
- A program to educate RTA employees on the CPUC's authority to access RTA facilities under California law, and;
- RTA's expectation is that employees will cooperate with RTSB inspectors and be responsive to their requests for access, records or other information.

RTSB's RBI requirements and protocols established in accordance with Special Directive 22-25 requirements are contained in the RTSB program Standard in Section 1.5.0 - INSPECTIONS OF RAIL TRANSIT AGENCIES and Section 1.6.0 - RECORD REVIEWS, COLLECTION, AND ANALYSIS.

OCTA acknowledges the Commission's authority for developing the RBI processes and procedures in Sections 1.5.0 and 1.6.0 and will incorporate these requirements as the required RBI procedures applicable in California into its Agency Safety Plan.

OCTA complies with the authority of the CPUC by assisting in providing timely responses, data requests, records requests, and assistance while on OCTA property. OCTA works in partnership with the CPUC on safety certifications, event reports, system modifications, and construction consultations. OCTA recognizes CPUC's authority outlined in the Public Utilities Code and other state laws, and all OCTA employees and contractors are required to comply with CPUC representatives performing regulatory oversight in accordance with those laws.

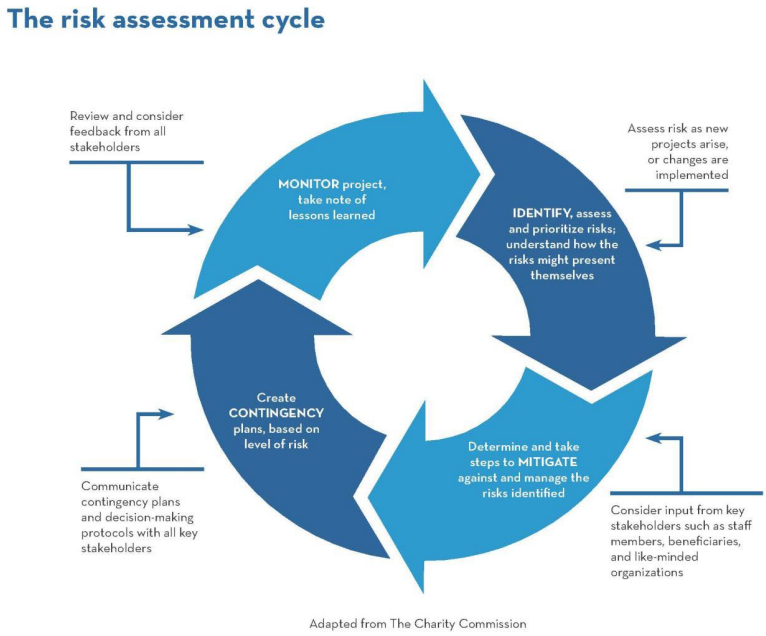
OCTA will provide the CPUC the data it requests to help them with identifying hazards and in assessing and mitigating safety risks. Examples of data that will be shared include: CPUC

- Hazard records
- Mitigation records
- Event records
- CAPs
- Near-miss records
- Maintenance records
- Inspection records
- Records of failures and defects
- Major maintenance activity schedule and progress records
- Adherence to maintenance schedules

Data will be provided to the CPUC at frequencies as required in their program standard. Timeframes for providing the data will be dependent on the nature and scope of the request and will be based on an agreed schedule with the CPUC. However, urgent requests will be processed as expeditiously as possible. All requests for data must be submitted by OCTA's CSO or their designee. The designee will coordinate with the OC Streetcar operations and maintenance contractor to collect the requested data and submit it to CPUC in accordance with the agreed-upon schedule.

**Figure 3**

**Risk Assessment Flow Diagram**




## 6.6 Emergency Preparedness

*Integration with Public Safety and Emergency Management*

Effective emergency preparedness, response, coordination, and training are essential elements to minimize loss resulting from an emergency or disastrous event. The objective of emergency preparedness and planning is to ensure fast, efficient response to emergencies or disasters in a manner that minimizes risk to the safety and health of passengers, employees, emergency response personnel, the community, and property.

*Responsibilities for Emergency Preparedness*

Responsibility of emergency preparedness planning, coordination, and training resides with OCTA management; however, the Security and Emergency Preparedness Department is responsible for providing a safe and secure environment with an "All Hazards" approach based on preparedness, protection, response, and recovery.

The primary OCTA Emergency Operations Center is located at the OCTA Administration Building, 600 South Main Street, Orange, CA 92868. OCTA's alternate EOC is located at the Garden Grove Annex.

The purpose of the EOC is to provide a facility from which the organization's response to an emergency can be coordinated effectively and to bring together all relevant information about the emergency in one place, organize that information into a useful format, and facilitate the coordination of resources needed to mitigate the effects of the emergency.

The EOC will provide a single focal point for centralized activities, which include:

- Management of information;
- Decision making;
- Resource support; and
- Resource application.

Transit Operations and local managers, supported by the Security and Emergency Preparedness Department, are responsible for training employees in emergency management, emergency resources (e.g., telephone numbers, local vendors, location and inventory of emergency supplies, etc.), and response protocols of local agencies.

OCTA's Security and Emergency Preparedness Department develops, implements, and administers agency-wide security and emergency management programs and procedures for all the agency's multimodal operations and activities in accordance with federal, state, and local regulations, industry standards and the agency's policies, including but not limited to:

- Emergency Operation Plan;
- System Security and Emergency Preparedness Plan*; and
- Continuity of Operations Plan*.

***Sensitive security information is available upon request and following the appropriate process.***

The Security and Emergency Preparedness Department also improves emergency preparedness by evaluating responses to actual events. An after-action review is conducted for every emergency response. For major events where there are multiple injuries, property damage, or service disruption, formal review meetings are conducted and documented.

*Emergency Exercises*

The SEP Department is responsible for the organizing and oversight of the annual emergency preparedness drill. Exercise planning is a continuous process with preliminary plans for subsequent activities established as each exercise is planned and conducted. Recommendations and primary safety goals and objectives that OCTA wants to convey to the emergency response agencies are presented to the Security and Emergency Preparedness Department which determines the drill scenario and location each year.

The execution of these activities will function as part of OCTA's safety review process and will serve to evaluate the emergency response capabilities and procedures of all involved parties. Scenarios are acted out to demonstrate, inform, and train OCTA

personnel and emergency responders of their individual roles and responsibilities. Findings generated through these activities are documented, and corrective actions generated and tracked through CAPs completion.

# 7. SAFETY ASSURANCE (673.27)

The safety assurance component describes how OCTA implements mitigations that are prudent and effective in addressing potential risk of identified hazards. Organizationally, safety-related data is collected, analyzed by the SMS Program Manager, and transmitted to the SMS/PTASP Committee for the purpose of review, identifying trends, and use by the agency to support safety objectives and goals.

## 7.1 Safety Performance Monitoring and Measurement 673.27 (b)(1)

Each OCTA department generates its own performance data used for detection of trends or problems prior to the development of major safety concerns. It is the task of OCTA's SMS Program Manager to monitor and measure the safety performance of the agency's operations through data provided from all OCTA departments and to report to the CSO and the PTASP SMS Committee quarterly.

ORIGAMI is an electronic tool used to track and monitor safety data and objective performance. ORIGAMI is a database that tracks an occurrence or condition, identifies the responsible party, and tracks an item's corrective/preventive actions to closure.

Selected data is accumulated and analyzed for ongoing trending and performance measurements, including fatalities, injuries to passengers and/or OCTA personnel, system reliability, and other safety related events. The SMS Program Manager reports the results of such data quarterly at the SMS/PTASP Committee meeting and Joint Labor Management Safety Committee.

## 7.2 Hazard Mitigation Monitoring Process 673.27 (b)(2)

Monitoring and measurement establishes a baseline for a system, comparing the difference between the criteria and condition at a specific point in time. Once a baseline or goal is established through monitoring and measurement, data can be used as criteria in evaluating operations to reduce risk and hazard and overall safety objective/goal achievement. Ongoing monitoring is built into OCTA's operations, performed continually, and responsive to change. Ongoing monitoring includes regular management and supervisory activities, comparisons, reconciliations, and other routine actions.

OCTA's Operations Management and the Safety Department perform base safety inspections, record the walk, and document any observations.

OCTA, under the regulatory requirements established by the California Occupational Health and Safety Administration (Cal/OSHA), also utilizes an Injury and Illness Prevention Program (IIPP) to establish methods and processes to identify and eliminate unsafe conditions or practices and control workspace safety hazards. All other local, state, and federal regulations that govern safety compliance outside the jurisdiction of the FTA support the SMS efforts.

*Safety Certification*

Safety certification is the process of verifying that safety requirements are included as early as the planning phase through the life of a project, ensuring the safety of customers, employees, emergency responders, and the public to aid in establishing a proactive approach towards hazard mitigation.

OCTA requires the safety certification process to be performed for major projects, rehabilitating or modifying existing systems, or to replace vehicles and equipment. Once the need for safety certification is identified, the process becomes part of the project, beginning with the preparation of the project specification and the design contracts. Safety objectives are considered during all activities of a project. Safety objectives include but are not limited to:

- Establish a formalized process that is sufficiently documented to verify compliance with safety requirements;
- Ensure safety is an integral part of the design, procurement, construction, testing, and operations;
- Ensure safety decisions are made by appropriate project managers, committees, and responsible contractors;
- Ensure any safety hazards and vulnerabilities that become apparent during reviews, reviews, inspections, or system testing are resolved, either by redesign, use of safety/warning devices, or by implementation and enforcement of special procedures; and
- Ensure affected outside response agencies, including fire and police departments, are prepared to respond.

## 7.3 Accident Notification, Investigation, and Reporting 673.27 (b)(3)

Effective accident/incident investigation and reporting is key to identifying and eliminating hazards to prevent reoccurrence. To minimize and control the threat to life, health, and property, it is essential all appropriate parties be notified of an accident/incident as quickly as possible to ensure a timely response to the scene. Accident/incident reporting and investigation shall be conducted to ensure all accidents/incidents are investigated objectively with the goal of determining causal factors and contributing causal factors.

OCTA's Incident and Injury Investigation Policy provides investigation criteria and guidelines for incidents that result in property damage, occupational injuries, environmental damage, or similar unforeseen harmful events. OCTA has an accident

notification system (NOTO), Everbridge, which sends email notifications to key organizational personnel, including the Safety Department, regarding an incident or passenger/employee injury. When Central Communications gets a call notifying them of an incident or injury, Central Communications logs the call, generates an occurrence in ORIGAMI and develops and distributes a NOTO. If necessary, in the event of an incident or injury, Emergency Response agencies will be dispatched immediately.

In the event of an accident/incident, a field supervisor has the responsibility to respond to the occurrence. The field supervisor will then report to his/her supervisor, who is responsible for notifying and updating base management and Central Communications during the response efforts. The report from the accident/incident or investigation is submitted to base management for review through ORIGAMI. The reporting structure/responsibilities for accidents/incidence is outlined in OCTA's Employee Safety Responsibilities Matrix.

If during an onsite investigation/inspection, a concern arises that constitutes an immediate threat to safety, OCTA staff and management will halt the operation through "stop work authority" and respond immediately to reduce the safety hazard to an appropriate level using the safety risk mitigation processes. Any issues or findings are provided to the CSO and SMS Program Manager in writing for tracking safety performance and for inclusion in the quarterly SMS/PTASP Committee meeting report.

### *Corrective Action Resulting from Accident Investigation*

CAPs for accidents and incidents will follow the same procedures delineated in the Safety Risk Management section.

## 7.4 Drug and Alcohol Policy

OCTA has implemented the Federal Transit Administration Regulations as set forth in 49 CFR Part 655 and require testing for prohibited substances in the case of transit accidents. OCTA's process for conducting such testing is delineated in the OCTA Drug and Alcohol Policy Manual.

## 7.5 Internal Safety Reporting Program Monitoring 673.27 (b)(4)

OCTA currently records and reports safety data from operations and facilities to the CSO and SMS Program Manager; the data is recorded and reported to the SMS/PTASP Committee. The SMS Program Manager monitors the safety data for performance measurement and trending. Further, in accordance with the FTA NTD Safety and Security Policy Manual, the OCTA data is recorded and reported in accordance with federal regulations.

### *Internal Safety Reviews*

OCTA's current internal review process is a proactive approach that verifies safety programs have been developed, implemented, and are effective. The internal review process assesses the effectiveness of safety programs, identifies process deficiencies, identifies potential hazards in the operational system, identifies weaknesses in system safety programs, verifies prior corrective actions are being tracked for closure and evaluates their effectiveness, recommends system safety improvements, provides management with an assessment of the system safety program, and assures continuing evaluation of safety-related programs, issues, awareness, and reporting. OCTA's SMS practices and processes may be evaluated in whole or in part, during regularly scheduled internal reviews and according to OCTA's Board-approved review plan.

OCTA will conduct its own independent review of the PTASP and SMS practices according to the SSOA schedule and requirements, using adequately trained SMS staff, consultants, or contractors. OCTA will also participate in the FTA triennial reviews, providing trained and knowledgeable staff and/or consultants in SMS, OCTA's operational processes, and appropriate documentation of such processes, as requested by reviewers.

## 7.6 Change Control 673.27 (c)

Stimuli for system changes and modifications originate both internally and externally and those changes may introduce new hazards and safety risks into transit operations. In either case, appropriate staff are assigned responsibility for managing and implementing the change and evaluating the change through the Safety Risk Management Process. This process demands coordination and cooperation within and between OCTA divisions, departments, and relevant outside agencies and organizations.

OCTA is establishing a process where all proposed changes will flow through the Change Control Committee, and this process will be in accordance with OCTA's Change Control Policy.

The Change Control Policy sets up a Change Control Committee that meets monthly, or as needed, to evaluate proposed and/or potential changes affecting OCTA systems; these changes include those affecting system reliability, system maintainability, system upgrades, system expansions, ability to share information with other systems, and the ability to integrate with other systems. The Change Control Committee discusses project status, planned future projects, new business and assignments, safety impacts, potential hazards, and other relevant topics. The Change Control process accommodates changes and ensures documents, records, and data remain concise and valid.

It is important that safety requirements are included as early as the planning phase through the life of a project, ensuring the safety of customers, employees, emergency responders, and the public is considered. Safety objectives are incorporated into all projects in accordance with the Change Control Policy.

## 7.7 Continuous Improvement 673.27(d)

Evaluation of the SMS is necessary to ensure it effectively and efficiently allows OCTA to meet safety objectives and performance targets. OCTA uses the data and information collected from the subcomponents in this Safety Assurance section while conducting safety performance monitoring to address any identified deficits in SMS organizational structures, processes, and resources in a timely manner. OCTA strives for continuous improvement and recognizes this is a dynamic process and significant efforts within Safety Assurance and Safety Promotion are required to improve systems and practices to comply with SMS standards.

### *Data Analysis and Tracking*

Safety-related data is collected, compiled, organized, stored, and maintained by individual departments. The data is then reported to and analyzed by, the SMS Program Manager. Further, the information gathered during this process is reported to the PTASP Committee by the SMS Program Manager and used by OCTA to identify hazards through trend analysis. If a trend is identified through the analysis, the trend is further investigated to determine the causes and tracked through resolution by the responsible department and the SMS Program Manager. Moreover, tracking of hazard–related data is used to identify trends; trends are further analyzed and/or investigated to determine causal factors. Identified hazards are categorized with corrective action recommendations. Corrective actions are tracked within the responsible department to closure using a hazard tracking log and reported to the SMS Program Manager.

### *Procurement Risk Mitigation*

OCTA's Procurement Policy describes procedures to guide staff members, potential vendors, contractors, and suppliers with respect to procurement activities taken on behalf of OCTA, recognizing safety and asset protection as core business values.

Equipment, materials, and professional services for use by OCTA are procured based on safety and industry specifications provided by the user department. OCTA policies and procedures require management to authorize all purchases. Requisitions are reviewed by the associated management of the requesting department for safety specifications and efficient and effective usefulness. Larger purchases require a contract developed under supervision of management and are subject to approval by the Board. This ensures all essential specification requirements, applicable standards and restrictions are included in the contract terms. Purchasing personnel are not authorized to modify the specifications or grant exceptions.

In its effort to ensure the procurement process considers and evaluates the safety aspects of services, equipment, and other materials obtained, OCTA includes safety specification requirements in all technical specifications and contracts. The Procurement Department requires all safety-related purchase requests to be reviewed and approved by the Project/Procurement Manager in consultation with the Safety Department.

***Transit Asset Management (TAM)***

TAM is a business model used to guide the prioritization of funding based on the condition of assets. TAM defines state of good repair as the condition of an asset to operate at full performance level: able to perform its designated function, does not pose an unacceptable safety risk, and its lifecycle investments have not been met or recovered. OCTA has adopted TAM as the official, institutional approach in managing infrastructure assets, making capital investment and operational expenditure decisions, and considers the results of its condition assessments while performing safety risk management and safety assurance activities. TAM data is provided to the SMS Program Manager for inclusion in the monthly SMS/PTASP Committee meeting agenda.

# 8. SAFETY PROMOTION (673.29)

Safety promotion fosters a positive safety culture and improves safety performance by increasing safety awareness through training and communication. Appropriate training for all employees, regardless of their position within OCTA, provides knowledge for a successful SMS. Through communication of lessons learned and safety performance data, employees are made aware of safety priorities and concerns as they relate to their individual job tasks and the entire OCTA organization. Developing a safety culture requires regular training and ongoing promotion. The activities below must be continually implemented, reviewed, and updated.

## 8.1 Safety Training Program 673.29 (a)

With the implementation of the PTASP and SMS, OCTA has adopted a training program to ensure all employees are aware of the PTASP and SMS responsibilities. New employees will be trained while attending new employee orientation/onboarding and current employees will undergo SMS/PTASP familiarization training. All employees will sign-off verifying they have been trained in the SMS process and understand their role and responsibility.

Employees at all levels of the agency need to understand 1) what SMS is, 2) how it supports OCTA's mission, and 3) what their specific individual SMS responsibilities are. OCTA has developed criteria to identify and provide skills training related to safe job performance to include initial and refresher training for all relevant job functions. Training includes measures for ensuring employees are competent to perform their safety-related duties.

OCTA has robust safety training programs including, but not limited to, the following:

- Student Coach Operator Training
- Operations new-hire training
- Annual Required Training (ART)

- CAL/OSHA required training
- OCTA Core 11 safety training
- Retraining based on performance deficits
- Maintenance new-hire and ongoing training
- Maintenance tailgate meetings
- Safety Spotlights

Employees receive training related to the employee safety reporting program during initial orientation training and are encouraged to use the identified mechanisms to report safety hazards, near misses, concerns, and issues. Coach operator and vehicle maintenance employee training programs provide opportunities for delivering SMS-related training. OCTA's six-week formal new-hire coach operator training program curriculum includes classroom and behind-the-wheel training. Operator and mechanic training include an eight-hour ART program to meet the requirements of a commercial driver's license. Maintenance employees receive extensive training at hire and aggressive ongoing skills development training and refresher training on safety-related topics.

All SMS/PTASP safety-related classroom and on-the-job-training is appropriately documented within individual employee safety training records and can be accessed through the Learning Management System (LMS) and records management. Training documentation for operators and mechanics is kept within the individual departments and mandatory administrative training is documented through the LMS software. All training records can be accessed upon request.

OCTA evaluates the effectiveness of its safety-related training through departmental inspections, compliance assessments, and reviews. All formal training processes shall be reviewed and reviewed periodically, when an accident investigation lists training as contributory, when training becomes suspect during any hazard analysis process, or when summary student test scores indicate low instructional effectiveness. All training classes, training manuals, and lesson plans are subject to review and review.

Safety-related training curriculum for all employees is updated to reflect new techniques, technologies, and results of investigations, corrective actions, and regulatory changes. OCTA provides training to employees on new equipment, technologies, and regulatory changes as necessary.

### *Emergency Response Planning, Coordination, and Training*

The Security and Emergency Preparedness Department is responsible for providing a safe and secure environment with an "All-Hazards" approach based on preparedness, protection, response, and recovery. The Department ensures OCTA is compliant with required employee training in the National Incident Management System and the 9/11 Commission Act.

Operations managers are responsible for training employees on evacuation procedures, facility emergency management organization, emergency resources, response protocols of local response agencies, and the SMS.

***Contractor Safety***

Contractors are required to comply with all applicable state and federal regulations and those established by OCTA. Each contractor is responsible for and shall comply with all safety, fire, security policies, procedures, and safe work practices, as well as any other appropriate safety procedures specified in the contract. OCTA reserves the right to review training activities at its discretion.

## 8.2 Safety Communication 673.29 (b)

OCTA has developed quantifiable goals to ensure performance can be tracked, evaluated, and measured for continued improvement and success. OCTA has established effective safety communication activities to ensure all employees and contractors are aware of the following goals and responsibilities:

- Continue growth and development of all OCTA SOPs, Policies, and Plans on an annual basis to ensure they reflect the current operating environment;
- Continue to grow SMS, allowing OCTA to systematically identify safety hazards, mitigate risk, and reduce fatalities and injuries resulting from transit operations;
- Reduce the injury incidence rate by minimizing exposure to unsafe conditions and reducing hazardous employee behavior;
- Provide a safe and efficient transit operation by ensuring that all vehicles, equipment and facilities are regularly inspected, maintained and serviced as needed; and
- Achieve 100 percent of scheduled routine inspections, preventive and regular maintenance work is completed on time, and essential repairs are addressed in a designated time.

Further, OCTA ensures employees and contractors are mindful of SMS responsibilities, processes, activities, and tools relevant to their responsibilities through the following communication platforms:

- Employee safety reporting;
- Safety meetings;
- Union meetings;
- Coach operator quarterly meetings with supervisors and managers;
- OCTA intranet; newsletters, safety bulletins, audio-visual monitors in break rooms;
- Signage;
- Operator log-in messages;
- Text message alerts;
- Radio supervisor communication with operators;

- One-on-one communication between supervisors and frontline employees;
- Daily Maintenance Tailgate meetings;
- Meetings with contractors;
- Committee meetings;
- Safety emails and notifications;
- Safety captains;
- Base television displays and bulletin boards;
- Safety campaigns;
- Intranet postings.

As part of the SMS program, the SMS Program Manager collects data to provide performance reports and trend analysis to the SMS/PTASP Committee to include the types of safety actions taken, why safety procedures have been introduced or changed, and information related to significant accident and incident investigation outcomes. OCTA communicates employees' responsibilities in OCTA Staff Safety Roles and SMS Responsibilities Matrix, Appendix B.

### 8.3 SMS Documentation and Records 673.11 (c), 673.31

OCTA must, at a minimum, maintain documents that set forth its PTASP, including those related to the implementation of its SMS, and results from SMS processes and activities. As part of 673.31 (d), OCTA will maintain all documentation regarding SMS and PTASP, including results. The documentation will be available upon request by the FTA or other federal/state entities having jurisdiction and to auditors. OCTA's SMS documentation will be maintained for three years, in accordance with FTA requirements and OCTA's records management.

OCTA has set up a SharePoint site application for all PTASP/SMS recordkeeping. The SharePoint site application allows for ease of document review, sharing, control, and archiving PTASP/SMS documents between authorized/applicable personnel. Documents on the SharePoint site may include but are not limited to: Draft and Final PTASP, meeting agendas, meeting minutes, reports of reviews, Emergency Management Plan, PTASP related correspondence, data reports, hazard analyses, corrective action logs, training, etc.

# APPENDIX A

## HAZARD MANAGEMENT PROCESS-IDENTIFICATION/ANALYSIS

OCTA facilities require system safety to be effective in helping identify and minimize hazards, in a mature operational environment. Hazardous conditions are identified, investigated, and resolved to an acceptable level. This hazard identification/analysis process document, and the associated system safety tasks, provide for a method of identifying, analyzing, assessing, and resolving conditions or circumstances that are deemed to present a threat to the safe operation of OCTA transit system.

This hazard analysis document incorporates proven methods of tests and inspections employed by each OCTA division and department, enabling the examination of all aspects of operation and review of their interdisciplinary ramifications. This provides management with hazard and risk visibility and the causes and effects of potential accidents. In addition, continual monitoring verifies the total system, including but not limited to, patrons, the public, employees, contractors, equipment, the environment; OCTA maintains an acceptable level of safety, and that potential hazards do not exist in operational areas previously determined to be safe.

Hazard identification and resolution is a core element of the PTASP and this hazard identification/analysis document, emphasizing timely correction of unsafe conditions, anticipated and reconciled before serious accident, injury, or damage occurs. To ensure it provides as safe and reliable transportation services as possible, OCTA has established a process by which hazards are identified, analyzed for potential impact on the operating system, and resolved in a manner acceptable to OCTA's management and applicable regulatory agencies.

OCTA management, staff, contractors, and suppliers are required to implement high standards of safety and system assurance throughout the design, construction, testing, and operational phases of OCTA's projects. Hazards, which cannot be eliminated in the design, are to be controlled by safety devices, warning devices, training, and/or written procedures to prevent mishaps. Most hazards are identified in the field, reported, and entered into reports. These hazards are addressed by the responsible departments through routine corrective measures and do not require special attention.

### Hazard Identification

Hazard identification is accomplished as department managers collect and analyze data to monitor trends. Unless additional resources are requested, the department manager investigates and resolves all hazards within their department. OCTA department managers review reports daily from the previous day's operation. Immediate corrective action is initiated when appropriate; otherwise, data is evaluated and used to set the agenda for the next PTASP/SMS Committee meeting and the Joint Labor Management Safety Committee. The SMS Program Manager prepares a trend analysis report for

PTASP/SMS meetings. Trend analysis reports are reviewed at PTASP/SMS Committee meetings. Additionally, each department manager reviews departmental reports and shift change briefings for the previous operational period and makes a similar evaluation for their department.

OCTA documents hazards that develop through multiple sources, such as accidents, incidents, and leading indicators. OCTA also evaluates hazards to determine if multiple events occurred leading up to an event. This ensures each possible cause is evaluated and documented for trending purposes. To address hazards resulting from system extensions or modifications, operational and other changes, safety analyses included in design and procurement contracts will provide for:

- Identification of potential hazards;
- Assessment of the severity and probability of occurrence of each potential hazard;
- Timely awareness of hazards for those who must resolve them; and
- Tractability and control of hazards through all phases of a project's life cycle.

*Hazard Investigation and Reporting*

Hazards which are not resolved at the operating, maintenance, or other front-line department level are appropriately investigated by the CSO, assisted by the responsible Operations Department. Investigation findings are documented and reported to the CSO for resolution.

**Safety Risk Assessment**

Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel error; environmental conditions; design inadequacies: and procedural deficiencies for a system, subsystem, or component failure or malfunction. The probability that a hazard will occur during the planned life expectancy of the system element, subsystem, or component can be described subjectively in potential occurrences per unit of time, event, population, items, or activity. A qualitative hazard probability may be derived from research, analysis, and evaluation of historical safety data from the same or similar systems. Supporting rationale for assigning a hazard probability is documented in hazard analysis reports.

The objective of hazard identification and analysis is to identify and define as many hazardous conditions as possible and enter them into the hazard resolution process before those conditions or associated actions cause or contribute to an accident. Although it is virtually impossible to identify every hazard, there are two basic time-tested methods for orderly identification of hazards: inductive and deductive. The inductive hazard identification method consists of an analysis of system components to identify their respective failure modes and the effects they will have on the total system. This method assumes the failure of single elements or events and, through analysis, determines the potential consequential effects on the system or subsystem. The techniques commonly used for inductive hazard identification include:

**Preliminary Hazard Analysis** – is a semi-quantitative analysis performed to identify potential hazards and accidental events that may lead to an accident, rank the identified accidental events according to their severity, and identify required hazard controls and follow-up actions.

**Sub-System Hazard Analysis** – is a safety analysis tool for identifying hazards, their associating causal factors, effects, level of risk, and mitigation design measures.

**Operating Hazard Analysis** – is performed to determine all applicable operational safety requirements for personnel, procedures, and equipment throughout all phases of the system life cycle. Engineering data, procedures, and instructions developed from other safety analyses, the engineering design, and initial test programs are all used to support this analysis. Operating hazards are generally resolved in preparation for operations by way of training, developing operating procedures, and developing emergency operating procedures.

These types of hazard analyses may also be utilized by OCTA during major capital projects, system modifications, system changes that require safety/security certification, or as determined by the CSO.

The deductive hazard identification method involves defining an undesired effect or event and then deducing the possible conditions or system component faults (or combinations thereof) which are necessary to cause the undesired effect or event.

**Hazard Analysis Methodology**

The hazard analysis methodology has two steps: evaluating hazard severity (categorizing the hazard) and evaluating hazard probability.

*Hazard Severity*

OCTA assigns a hazard severity rating based on the definitions in the standardized risk process MIL-STD-882E. It is a subjective determination of the worst case that could be anticipated to result from design inadequacies, human error, component failure or malfunction. The ratings are:

**Category 4, Catastrophic** - Operating conditions are such that design deficiencies, human error, element, subsystem or component failure, or procedural deficiencies may cause death or major system loss and require immediate termination of the unsafe activity or operation.

**Category 3, Critical** - Operating conditions are such that design deficiencies, human error, element, subsystem or component failure, or procedural deficiencies may cause severe injury, severe occupational illness or major system damage and require immediate corrective action.

**Category 2, Marginal** - Operating conditions are such that they may result in minor injury, occupational illness or system damage and are such that human error, subsystem or component failures can be counteracted or controlled.

**Category 1, Negligible** - Operating conditions are such that human error, subsystem or component failure, or procedural deficiencies will result in less than minor injury, occupational illness or system damage.

Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel error, environmental conditions, design inadequacies, and procedural deficiencies for a system, subsystem or component failure or malfunction. It reflects the principle that not all hazards pose an equal amount of risk to personnel safety.

***Hazard Severity Index***

| HAZARD SEVERITY | | |
|---|---|---|
| **Category** | **Severity** | **Characteristics** |
| **4** | Catastrophic | Death or system loss |
| **3** | Critical | Severe injury, severe occupational illness or major system damage |
| **2** | Marginal | Minor injury, minor occupational illness or minor system damage |
| **1** | Negligible | Less than minor injury, occupational illness or system damage |

### *Hazard Probability*

The probability that a hazard will occur during the planned life expectancy of the system element, subsystem, or component can be described subjectively in potential occurrences per unit time, event, population, items, or activity. A qualitative hazard probability may be derived from research, analysis, and evaluation of historical safety data from the same or similar system. OCTA assigns a probability rating to a particular event or a specific hazard occurring during the planned life expectancy of the operating system. Supporting rationale for assigning a hazard probability is documented in hazard analysis reports.

### *Hazard Probability Index*

| HAZARD PROBABILITY | | | |
|---|---|---|---|
| **Description** | **Level** | **Specific Individual Event** | **Fleet/ Inventory** |
| **Frequent** | 6 | Likely to occur frequently | Continuously experienced |
| **Probable** | 5 | Will occur several times in the system's lifecycle | Will occur frequently |
| **Occasional** | 4 | Likely to occur sometime in the system's lifecycle | Will occur several times |
| **Remote** | 3 | Unlikely, but possible to occur in the system's lifecycle | Unlikely, but can be expected to occur |
| **Improbable** | 2 | So unlikely it can be assumed occurrence may not be experienced | Unlikely to occur but possible |
| **Eliminated** | 1 | Eliminated | |

### *Hazard Categorization (Identified by Hazard Risk Index)*

Through the established process, OCTA will assess the level of risk for each identified hazard to determine what action(s) must be taken to correct or document the hazard risk. This risk assessment system is incorporated into formal analysis which enables the CSO and CEO, if concurrence is necessary, to understand the amount of risk involved in accepting the hazard in relation to the cost (schedule, dollars, operations, etc.) to reduce the hazard to an acceptable level.

Hazard risk assesses the risk based upon hazard category and probability and the criteria for defining further actions based upon the index.

OCTA applies its collective, deductive reasoning and/or may utilize a method represented by MIL-STD-882E. The information is compiled, and any necessary statistics or trend information is entered into the permanent file.

### *Hazard Risk Index*

| HAZARD RISK INDEX | | | | |
|---|---|---|---|---|
| Frequency of Occurrence | Negligible | Marginal | Critical | Catastrophic |
| **6** | 6 | 12 | 18 | 24 |
| **5** | 5 | 10 | 15 | 20 |
| **4** | 4 | 8 | 12 | 16 |
| **3** | 3 | 6 | 9 | 12 |
| **2** | 2 | 4 | 6 | 8 |
| **1** | 1 | 2 | 3 | 4 |

Probability

Severity

When the Hazard Severity Index is combined with the Hazard Probability Index, the result is the Hazard Risk Index. Each Hazard Risk Index requires a specific level of action. Actions will be taken to eliminate identified hazards or reduce the associated risk. A hazard with a risk index of "unacceptable" is not permitted and must be redesigned or modified to eliminate or minimize and control the hazard to a more acceptable level.

### *Hazard Acceptance Criteria*

| HAZARD ACCEPTANCE CRITERIA | | | |
|---|---|---|---|
| Hazard Risk Index | | Decision Authority | Special Conditions |
| | **10 - 24** | Unacceptable | Requires review by CSO and Executive Director |
| | **4-9** | Undesirable | Requires review by CSO and Executive Director |
| | **2-3** | Acceptable with Review | Requires review by CSO |
| | **1** | Acceptable | Determination made by manager, no review required |

## Hazard Control and Elimination

Before implementation of any corrective action, system safety analyses establish a hazard severity category (1 through 4) and a probability ranking (1 through 6) which are combined to form a Risk Index, reflecting both severity and probability of occurrence for each identified hazard. The range of possible Risk Indices is shown in the Hazard Acceptance Criteria.

### *Hazard Risk Indices*

Risk assessment criteria will be applied to the identified hazards based on their estimated severity and probability of occurrence to determine acceptance of the risk or the need for corrective action to further reduce the risk.

Action will be taken to eliminate identified hazards or reduce the associated risk. Catastrophic and critical hazards will be eliminated, or their associated risk reduced to an acceptable level. If this is impossible or impractical, alternatives will be recommended for the appropriate decision-making Hazard Resolution and Control.

OCTA shall use the Hazard Resolution and Control process as described below. The process involves the analysis and corrective action taken to reduce the risk associated with an identified hazard to the lowest practical level. The order of precedence resolving identified hazards is as follows:

- **Design for Minimum Risk**. Design new facilities and equipment to eliminate hazards. If an identified hazard cannot be eliminated, its associated risks must be reduced to an acceptable level through the design selection.

- **Utilization of Safety Devices**. If an identified hazard cannot be eliminated, or its associated risk cannot be reduced through design selection, that risk must be reduced to an acceptable level using protective safety features or devices. Provision is made, and procedure is issued for periodic inspection and functional checks of safety devices.

- **Warning Devices**. When neither design nor safety devices can effectively eliminate identified hazards or reduce risk to an acceptable level, warning devices are used to detect the condition and produce an adequate warning signal to alert individuals to the hazard. Warning devices are standardized to minimize the probability of incorrect reaction of personnel to these warning signals.

- **Develop Special Procedures and Training**. When it is impossible or impractical to eliminate hazards through design selection or adequately reduce its associated risks through safety or warning devices, then approved procedures and special training programs are used. Procedures may include the use of personal protective equipment. Precautionary notations and warning signs are standardized. OCTA employees who perform critical tasks require certification of personal proficiency.

Facility and system contract documents require that contractors/suppliers solve hazards in accordance with this list, in order of precedence. Specifications include the requirement for contractors/suppliers who provide system, subsystem or equipment during construction to establish and maintain a safety program. These programs, at a minimum, define objectives, tasks, procedures, schedules, and data submittal for the safety

activities that are performed by the contractor/supplier. The safety program and supporting documentation are subject to review and approval by OCTA.

Hazards identified within the system are evaluated by the Safety Committee, appropriate staff, and eliminated and controlled to a level acceptable to OCTA. As part of the hazard resolution process, reports summarizing status of safety issues and concerns are prepared and distributed to OCTA's management and other project participants for review and comment.

The Accountable Executive or CSO has authority to implement any change that has system safety implications. Accordingly, all hazard identification and analysis proceedings result in the issuance of a report by Safety to the Accountable Executive. The report is prepared by Safety and includes all pertinent data developed on the identified hazard. A recommendation achieved by consensus must be included, regardless of whether this recommendation is for a change in existing conditions or procedures, or for retention of the status quo. Any disagreement on the matter, or suggested negative ramifications of the recommendation, must also be included, to present as much information as possible to the Accountable Executive.

Hazards identified within the system are to be evaluated by appropriate staff and eliminated or controlled to an acceptable level. The following schedule has been developed to ensure the optimum level of safety is achieved through the expeditious resolution of hazards. All hazard levels are reviewed by appropriate staff. In the event the hazard has been categorized as UNACCEPTABLE, the CSO is responsible for maintaining the necessary information, notifications and CAPs.

| HAZARD RESOLUTION SCHEDULE | |
|---|---|
| Criterion | Resolution Timetable |
| Unacceptable (UN) | Must be eliminated as soon as possible; there is no other option. |
| Undesirable (UD) | Must be resolved in 30 working days |
| Acceptable with review (WR) | Must be resolved in 30 working days |
| Acceptable | Notification within 30 working days |
| Eliminated | No notification required |

Warning, caution, and other forms of written advisories cannot be used as the only method of risk reduction for UN (Catastrophic) and UD/WR(Critical) hazards.

**Hazard Tracking**

OCTA will utilize a hazard tracking log which consists of the following information and is maintained by the CSO:

- Assigned hazard number;
- Date hazard identified;
- Hazard title;
- Hazard description;
- Sources from which it was identified;
- The element of OCTA's operation affected by the hazard;
- Initial hazard classification;
- Current hazard classification; and
- CAP.

The hazard tracking log is updated monthly or as requested. All captured data is analyzed for the identification of developing trends to ensure future safety risks/hazards can be mitigated and/or eliminated.

# APPENDIX B

# PTASP RELATIONSHIP TO OTHER FEDERAL REGULATIONS

## Public Transportation Safety Program Rule - 49 U.S.C. § 5329

The Public Transportation Safety Program Rule establishes substantive and procedural rules for FTA's administration of the Public Transportation Safety Program authorized by 49 U.S.C. § 5329. The rule establishes FTA's (SMS) approach to the development and implementation of the Safety Program. Further, it sets rules of practice for the FTA's enforcement authority and describes the contents of a National Public Transportation Safety Plan.

*National Public Transportation Safety Plan- section 5329(b)*

Through the NPTSP, the FTA has adopted the principles and methods of SMS as the basis for enhancing the safety of public transportation in the United States. The NPTSP is a policy document, communications tool, and a repository of standards, guidance, best practices, tools, technical assistance, and other resources.

OCTA's PTASP was written in accordance to the PTASP rule and the NPTSP was a core document in outlining OCTA's SMS.

## Public Transportation Agency Safety Plan Rule - 49 CFR Part 673

The FTA published a final rule for PTASP as authorized by the MAP–21. This final rule requires states and certain operators of public transportation systems that receive federal financial assistance under Urbanized Area Formula Program (49 U.S.C. § 5307) to develop safety plans that include the processes and procedures to implement SMS. Transit operators must certify they have a safety plan, meeting the requirements of the rule in place by July 20, 2020. To remain compliant, OCTA will review and revise the Plan annually and have it certified by the OCTA Board.

The safety plan requirements for rail transit agencies under FTA's original State Safety Oversight Rule (49 C.F.R. Part 659) implemented system safety through 21 specific requirements for System Safety Program Plans (SSPPs). The major focus of system safety is to integrate risk management into the overall system engineering process rather than addressing hazards as day-to-day operational considerations. The PTASP replaces the current OCTA Bus System Safety Program Plan. Once the OC Streetcar is in operation, OCTA will be fully responsible to the safety plan requirements and for having related practices reviewed by the appropriate State Safety Oversight Program.

**State Safety Oversight Rule - 49 CFR Part 674**

On March 16, 2016, the FTA issued a final rule for SSO to oversee the safety of rail fixed-guideway public transportation systems, and entities that own or operate rail fixed-guideway public transportation systems with federal financial assistance authorized under 49 U.S.C. Chapter 53.

The SSOA has authority to review, approve, oversee, and enforce the PTASP for a rail fixed-guideway public transportation system required by 49 U.S.C. 5329(d). The SSOA has investigative and enforcement authority with respect to the safety of all rail fixed-guideway public transportation systems within the State.

Once the OC Streetcar initiates revenue operations, at least once every three years, the SSOA will audit OCTA's compliance with the Public Transportation Agency Safety Plan required by 49 U.S.C. 5329(d). At least once a year, the SSOA reports the status of the safety of each rail fixed-guideway public transportation system to the Governor, the FTA, and the Board, or equivalent entity, of the rail fixed-guideway public transportation system. The FTA will audit each state's compliance at least triennially, consistent with 49 U.S.C. 5329(e)(9).

**Transit Asset Management Rule - 49 CFR Part 625**

Through the implementation of its TAM Plan, required under 49 C.F.R. Part 625, OCTA can consider the results of its condition assessments while performing safety risk management and safety assurance activities. The PTASP final rule applies to only Section 5307 recipients and sub-recipients, and the TAM rule applies to all operators of public transit. However, the two plans can support one another by providing useful data for agency use and NTD reporting.

The results of TAM condition assessments, and subsequent SMS analysis can help prioritize a transit agency's TAM Plan elements. Condition assessments help identify potential safety issues, which could undergo a safety risk assessment as part of SRM. Further, TAM data and analysis can also be used for performance monitoring and measurement as part of safety assurance. Results of safety risk assessments and safety performance monitoring and measurement can guide the prioritization of an asset for repair or replacement. OCTA is responsible for both the TAM Plan and the PTASP and can benefit by coordinating efforts and data.

**Public Transportation Safety Certification Training Program Rule - 49 CFR Part 672**

The Safety Certification Training Program establishes a curriculum and minimum competencies for federal SSOA personnel and contractors who conduct safety audits and examinations of rail fixed-guideway public transportation systems, and for designated transit agency personnel and contractors who are directly responsible for safety oversight of a recipient's rail fixed-guideway public transportation systems. The final rule for the Safety Certification Training Program replaces an interim program which became

effective on May 28, 2015. OCTA should continue to educate individuals who are directly responsible for SMS or are directly responsible for safety oversight to ensure compliance.

**National Transit Database Rule 49 U.S.C 5335(a)**

Transit agencies receiving funding from the Urbanized Area Formula Program (5307) or Rural Formula Program (5311) are required to submit data to the NTD in uniform categories. OCTA submits reports to NTD each fiscal year. The PTASP rule and NTD reporting rule are related, as both rules require OCTA to track data based on the same data points, fatalities, injuries, and safety events per total revenue vehicle mile by mode, with the additional requirement of mean distance between major mechanical failures.

The following table is a summary of FTA safety regulations, which impact the PTASP, requiring OCTA compliance.

**FTA SAFETY REGULATIONS**

| Regulation | Overview |
|---|---|
| Public Transportation Safety Program Rule<br>CFR Part 670 | Establishes the procedural rules for enforcement of FTA's safety programs. |
| National Public Transportation Safety Plan<br>49 U.S.C. 5329 | Manages the safety risks and safety hazards within public transportation systems. |
| Public Transportation Agency Safety Plan<br>49 CFR Part 673 | Requires transit agencies to develop and implement safety plans based on SMS principles, performance targets. |
| State Safety Oversight<br>49 CFR Part 674 | Strengthens state oversight of rail transit systems. |
| Transit Asset Management<br>49 CFR 625 | TAM Plan establishes state of good repair performance measures and targets NTD reporting. |
| Public Transportation Safety Certification Training Program<br>49 CFR Part 672 | Establishes training curriculum to ensure basic level of safety-related competency for rail transit system auditing and oversight. |
| National Transit Database<br>49 U.S.C. 5335(a) | Reporting system, using uniform categories to accumulate public transportation financial, operating, and asset condition. |

Source: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/regulations-and-guidance

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# APPENDIX C

## REFERENCED AND RELATED DOCUMENTS

Change Control Policy
Continuity of Operations Plan (COOP)
Drug and Alcohol Policy
Drug and Alcohol Policy Manual
Ethicspoint Policy
Emergency Operation Plan (EOP)
Hazard Identification/Analysis
Injury and Illness Prevention Program (IIPP)
Internal Audit Policy
Joint Labor Management Safety Committee Policy
National Transit Database (NTD) Reporting Policy
OC Streetcar – Public Transportation Agency Safety Plan (PTASP)
Procurement Policy
Records Management Policy
System Security and Emergency Preparedness Plan (SSEPP)
Safety Review Process
Safety Captain's Committee Policy
Transit Asset Management Plan
Workplace Violence Prevention Policy