

Oregon Department of  
Transportation  
State Safety Oversight Agency  
Annual Report  
Calendar Year 2023



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## Acronyms

|        |   |
|--------|---|
| ART    | Astoria Riverfront Trolley                                |
| BIL    | Bipartisan Infrastructure Law                             |
| CAP    | Corrective Action Plan                                    |
| CCD    | Commerce & Compliance Division                            |
| CFR    | Code of Federal Regulations                               |
| CMP    | Configuration Management Plan                             |
| FLSC   | Fire Life Safety Committee                                |
| FTA    | Federal Transit Administration                            |
| ISAP   | Internal Safety Audit Process                             |
| MOW    | Maintenance of Way  |
| OAR    | Oregon Administrative Rules                               |
| OCS    | Overhead Catenary System                                  |
| ODOT   | Oregon Department of Transportation                       |
| ORS    | Oregon Revised Statutes                                   |
| PBOT   | Portland Bureau of Transportation                         |
| PSC    | Portland Streetcar  |
| PSI    | Portland Streetcar, Inc.                                  |
| PTASP  | Public Transportation Agency Safety Plan (same as ASP)    |
| RBI    | Risk Based Inspection                                     |
| REM    | Rail Equipment Maintenance                                |
| RFGPTS | Rail Fixed Guideway Public Transportation System          |
| RTA    | Rail Transit Agency                                       |
| SMS    | Safety Management System                                  |
| SSCP   | Safety and Security Certification Plan                    |
| SSOA   | State Safety Oversight Agency                             |
| TCRC   | Transit Change Review Committee                           |
| TPSS   | Traction Power Substation                                 |
| TriMet | Tri-County Metropolitan Transportation District of Oregon |
| WSC    | Workplace Safety Committee                                |
| WST    | Willamette Shore Trolley                                  |

## A. Summary

The Oregon State Safety Oversight Agency (Oregon SSOA), housed within the Oregon Department of Transportation's (ODOT) Commerce and Compliance Division (CCD), is responsible for safety oversight of the light rail, streetcar, and trolley systems within Oregon, all of which are termed Rail Fixed Guideway Public Transportation Systems (RFGPTS). These are regulated separately and distinctly from heavy rail, such as Amtrak or Westside Express Service Commuter Rail. Currently, there are two RFGPTS that receive federal funding, placing them under federally mandated state oversight, as well as under state regulations. There are two smaller systems that do not receive federal funding, and therefore are subject only to state regulations.

## B. Overview

Oregon is one of thirty-one states, including the District of Columbia and Puerto Rico, with a designated SSOA program. Through inspections, audits, investigations, attendance at various meetings, and document review, the Oregon SSOA program oversees the safety of RFGPTS for compliance with the following laws and regulations:

- 49 United States Code 5329(e).
- The Code of Federal Regulations (CFR) found in 49 CFR Parts 40, 655, 670, 672, 673, and 674.
- Oregon Statutes (*e.g.*, ORS 824.045).
- Oregon Administrative Rule (OAR), Division 741, Chapter 60 (federally funded).
- Oregon Administrative Rule (OAR), Division 741, Chapter 65 (non-federally funded).

The Tri-County Metropolitan Transportation District of Oregon (TriMet) light rail system, commonly referred to as MAX, and the Portland Streetcar (PSC), receive federal financial assistance, thereby placing them under federal and state jurisdiction and subject to both federal and state regulations. Astoria Riverfront Trolley (ART) and Willamette Shore Trolley (WST) do not receive federal financial assistance; they are subject to state (but not federal) oversight.

This report focuses on those systems subject to federal regulations, pursuant to 49 CFR 674.13(a)(7), which requires that, at least once a year, the SSOA reports the status of the safety of each RFGPTS to the Governor, the Federal Transit Administration (FTA), and the board of directors, or equivalent entity, of each RFGPTS. The Oregon SSOA Program Standard further requires that Oregon SSOA summarize the oversight activities for the preceding twelve months, describing the causal factors of accidents identified through investigation, identifying the status of corrective action plans, changes to Public Transportation Agency Safety Plans (PTASP), and the level of effort by Oregon SSOA in carrying out its oversight activities.

## C. Current Regulatory Environment

On November 15, 2021, President Biden signed into law the Bipartisan Infrastructure Law, which amended FTA's safety program at 49 U.S.C. 5329. Changes to 49 U.S.C. 5329(d) required minor to moderate changes to each agency Public Transportation Agency Safety Plan (PTASP) including: a) establishment of a safety committee convened by a joint-labor management process consisting of an equal number of frontline employee representatives and managers; b) safety committee approval of the PTASP each year; c) a safety committee utilized to identify and recommend risk-based mitigations or strategies necessary to reduce the likelihood and severity of identified risks; d) strategies to minimize employees and riders to exposure of hazards and unsafe conditions as recommended by the Centers for Disease Control and Prevention or a State health authority and e) the establishment of performance safety targets in alignment with the National Public Transportation Safety Plan. Additionally, the law requires additional training covering mitigations of

assaults on transit workers and de-escalation training and establishes additional training requirements to be considered for operations and maintenance personnel responsible for safety.

In late 2022, FTA issued a special directive to each of the thirty-one SSOAs that oversee RFGPTS. Special Directive No. 22-43, issued to Oregon SSOA on October 21, 2022, requires it to develop and implement a Risk-Based Inspection program (RBI) as required by 49 U.S.C. 5329(k). Oregon SSOA already conducts inspections and has for many years. The primary driver of a risk-based inspection is to focus oversight energies on the areas of highest risk at a RFGPTS by using data provided, collected, and observed. Oregon SSOA does employ a risk-based inspection approach to its current inspections, but there will be adjustments made to the inspection process. Oregon SSOA began collaborating with both RFGPTS in April 2023 to further establish agreed upon procedures for Oregon SSOA to conduct risk-based inspections at RFGPTS properties.

A primary component of the new special directive is data sharing between the RFGPTS and SSOA; the FTA directive requires the SSOA to have unfettered access to RFGPTS data needed to direct the SSOA to areas where safety risk is highest at each RFGPTS. The state of Oregon has current OARs that already provide Oregon SSOA the level of access necessary, so Oregon SSOA will have more time to develop other changes to the current inspection program to align it fully with FTA's risk-based inspection requirements.

Another major component and requirement by FTA is an SSOA data storage system robust enough to store and analyze data submitted by the RFGPTS or collected by the SSOA. In October 2023, Oregon SSOA selected ODOT's internal IT division to develop an application to replace the current Oregon SSOA MS Access Database. The new application, called SSOA Rail Online, is a cloud-based application that will store safety event data, corrective action plans, inspection reports, and hazard information. SSOA Rail Online will allow Oregon SSOA to generate customizable reports that will direct risk-based inspection activities toward areas of highest safety risk at each RFGPTS. Field inspection reports can be generated via tablets and sent to the each RFGPTS immediately upon completion.

FTA released several other proposed federal rule updates in 2023. When finalized, these rule updates will require Oregon SSOA to revise the OARs and the Oregon SSOA Program Standard. Each RFGPTS must also realign organizational processes to comply with the new rules. Below is a summary of proposed rule updates issued by FTA in 2023:

#### 49 CFR Part 672

In April 2023, FTA proposed updates to the Public Transportation Safety Certification Training Program (PTSCTP). The proposed updates will refine the PTSCTP communication process, add administrative requirements and clarify voluntary PTSCTP participation and refresher training requirements. The rule maintains the existing minimum training requirements for SSOA and rail transit safety personnel. As proposed, the final rule could require SSOAs to track RFGPTS employees' completion of initial and recertification coursework, which is currently done by the RFGPTS and FTA.

#### 49 CFR Part 670 and 49 CFR Part 673

In April 2024, FTA finalized its first major rule update to the PTASP regulation (49 CFR Part 673), concurrent with the National Public Transportation Safety Plan (49 CFR Part 670). These updates are a part of a continuing effort to improve transit safety performance on federally supported transit systems, and PTASP is the first rule finalized by FTA under the Bipartisan Infrastructure Law requirements to make transit safer for both transit workers and passengers alike. At a high level, the PTASP updates incorporate Bipartisan Infrastructure Law requirements, advances Safety Management System (SMS) processes, increases frontline transit worker

involvement, expands de-escalation training, and addresses safety risk, including assaults on transit workers, transit vehicle-pedestrian collisions and infectious disease exposure.

The National Public Transportation Safety Plan is FTA's primary guidance document to improve transit safety performance on all federally supported public transportation systems and includes best practices, tools, technical assistance, voluntary standards, and other resources. The updates incorporate Bipartisan Infrastructure Law requirements for PTASP safety performance measures and lay out a performance-based approach to reduce injuries and fatalities on transit systems under FTA's safety jurisdiction. While the National Public Transportation Safety Plan is not a regulation and does not impose mandatory requirements, it creates a blueprint for transit agencies to adopt stronger safety processes. The updated rule adds additional safety performance targets in their respective agency safety plans.

#### 49 CFR Part 674

In November 2023, FTA proposed updates to 49 CFR Part 674 State Safety Oversight. The proposed rule would result in additional oversight of safety-related activities of RFGTPS by SSOAs. The proposed update would reflect new statutory requirements including inspection authorities to the list of authorities an SSOA must have, reflecting the new requirements in 49 U.S.C. 5329(k) that SSOAs must conduct risk-based inspections of each RFGTPS that the SSOA oversees. Oregon SSOA already has these authorities under current OARs. Nonetheless, Oregon SSOA will need to revise the current OARs and the Oregon SSOA Program Standard to align with proposed definition changes of safety events, in addition to adding a new section to the program standard that includes all FTA requirements stipulated by FTA's risk-based inspection program. This work is ongoing with a target completion date of August 31, 2024, concurrent with Oregon SSOA's Risk Based Inspection Program plan submission to the FTA.

#### 49 CFR Part 675 Advanced Notice of Proposed Rulemaking, Hours of Service & Fatigue Management

In October 2023, the FTA issued an advance notice of proposed rulemaking, considering proposing minimum safety standards to provide protections for transit workers to obtain adequate rest thereby reducing the risk of fatigue-related safety incidents. FTA is currently seeking public input in two areas: hours of service and fatigue risk management programs. Currently, neither TriMet or Portland Streetcar have a formal fatigue management program, although both have hours of service policies (in accordance with the applicable OARs) and agreements with the Amalgamated Transit Union that are codified within the Working and Wage Agreement.

### **D. Program Function**

The Oregon SSOA program is structured to maximize RFGTPS safety and to fulfill all FTA requirements found in 49 CFR Parts 673 and 674. Towards that end, in July 2021, Oregon SSOA updated its OARs to reflect the changes in the federal regulations related to 49 CFR 673 and 674. Thereafter, Oregon SSOA updated and revised its federally required program standard, a legal document that identifies RFGTPS responsibilities for safety functions and explains how Oregon SSOA interprets the regulations and what is expected of the RFGTPS to comply. The revised version of the program standard was issued to each RFGTPS in November 2021 and a follow-up revision was issued in November 2022. For the next update, expected by August 2024, the Oregon SSOA will conduct joint work sessions with both TriMet and PSC for comment and review of proposed changes to the program standard.

Oregon SSOA's current program standard discusses:

- The development, implementation, and subsequent revisions and reviews of the PTASP, and Oregon SSOA's review and approval of said PTASP;
- Investigations of accidents, incidents, and occurrences;
- Review, approval, and oversight of the development and implementation of CAPs related to accidents, hazards, internal and external reviews and audits, etc.;
- Hazard identification, assessment, and mitigations across all areas of the RFGPTS;
- Reporting and notification requirements for safety events to SSOA and FTA, in addition to documents required by Oregon SSOA for review;
- State laws regarding hours of service requirements and reporting;
- State laws regarding prohibited use personal electronic devices;
- Regular and periodic on-site reviews of PTASP implementation and compliance, including triennial safety audits.

The program standard provides procedures for how to manage corrective actions, including monitoring and review, safety risk management and monitoring, auditing, internal safety reviews, and accident investigation. It also explains the Oregon SSOA's statutory obligations and those of the RFGPTS, along with guidance and examples.

## **E. SSOA Program Staffing**

The program currently has four full-time rail transit compliance specialists managed by ODOT Rail Safety & Regulatory Compliance Branch Manager Chris Malm. The newest specialist joined the Oregon SSOA program in January 2023 and is a qualified track inspector from BNSF Railway. Dedicated subject matter expertise for RFGPTS track structures is new for Oregon SSOA and has been critical to improving oversight of Maintenance of Way Programs at TriMet, PSC, ART and WST.

FTA's special directive for risk-based inspections requires Oregon SSOA to update its workload assessment and ensure that the program has an adequate number of staff with requisite expertise in the program to perform inspections covering many areas at the RFGPTS. Except for the triennial review, Oregon SSOA does not perform regular audits, reviews, oversight activities or investigations of REM because the program does not have the subject matter expertise on-hand to perform them. A procurement process began in 2023 and, in April 2024, a request for proposal was issued for SSOA consultant support. The three-year contract will support Oregon SSOA's efforts to improve oversight and inspections of REM divisions at TriMet and Portland Streetcar as well as provide increased oversight of hazard mitigations, corrective action plans, PTASP implementation, and increased presence and participation at TriMet and Portland Streetcar, and support Oregon SSOA's work in complying with the changing federal regulations.

## **F. Rail Fixed Guideway Public Transportation Systems under SSOA Oversight**

### **1. Tri-County Metropolitan Transportation District of Oregon (TriMet)**

#### **SSOA Oversight Activities 2023**

##### **Field Inspections/Observations/Evaluations**

In 2023, the Oregon SSOA visited the field and conducted a total of 113 inspections. A vast number of inspections included maintenance of way track inspections, taking full advantage of the additional oversight expertise added to the SSOA program in 2023. Oregon SSOA staff attended 138 meetings at TriMet during 2023 covering a wide variety of topics, including PTASP update meetings, safety committee meetings, status check-in meetings for corrective actions plans, and accident review meetings.

##### **Oregon SSOA Triennial Review of TriMet**

Oregon SSOA conducted a triennial review of TriMet in 2023, as required by the applicable regulations. Every three years, the Oregon SSOA must conduct a triennial review of the agency's adherence to the PTASP and compliance to processes, rules, and procedures established by TriMet, in addition to requirements of the Oregon SSOA Program Standard, 49 CFR Parts 40, 655, 670, 672, 673 and 674, and the OARs.

The 2023 triennial review is the first performed since the finalization of FTA Rule 49 CFR Part 673 Public Transportation Agency Safety Plans. The number and type of findings suggest that TriMet is struggling in some areas to implement central tenets of its safety management system. Maintenance of Way training appears to need strengthening across its disciplines, particularly training and record keeping. The audit identified thirty-one findings of non-compliance that resulted in Corrective Action Plans (CAPS). Each finding is summarized below:

- F1 TriMet has not reported on its safety performance targets.
- F2 TriMet's PTASP does not adequately describe the safety roles and responsibilities of all agency departments.
- F3 There is no documented evidence that the workplace safety committees (WSC) are consistently fulfilling their hazard analysis roles and responsibilities.
- F4 WSCs are not consistently using the WSC agenda and minutes templates, resulting in varying formats and levels/types of information captures, pursuant to the Workplace Safety Committee Program document.
- F5 The Transit Change Review Committee (TCRC) charter was not completed at the time of the audit.
- F6 There is no documented evidence the TCRC is fulfilling its safety risk analysis role and responsibilities.
- F7 TCRC meeting minutes do not document the Safety Risk Assessment process for proposed changes other departments bring to the committee for review, as specified in Sections 3.5.1 and 5.2.3 of the ASP.
- F8 The Fire Life Safety Committee (FLSC) did not convene as required for the Better Red expansion project.
- F9 TriMet did not develop a Safety and Security Certification Plan (SSCP) for the Type 6 LRVs.
- F10 Section 4.3 of the PTASP contains outdated and duplicative information relative to current safety risk management processes at TriMet.
- F11 TriMet also reported there is no centralized repository of information for trend analysis.
- F12 TriMet noted the agency may not have the appropriate resources to collect and analyze data, despite recently hiring a new data analyst.
- F13 TriMet does not currently perform safety risk assessments of ODOT SSOA inspection findings and observations.



- F14 As of this audit, TriMet was not fully implementing Safety Data Monitoring and Measurement activities.
- F15 TriMet has not established minimum requirements for the notification, investigation, and reporting of safety events and hazards involving rail transit vehicles for E&C, its contractors, and other stakeholders, for segments of the MAX light rail that are not currently in revenue service, per OAR Section 741-060-0076(1) and Section 6 of the ODOT SSOA Program Standard.
- F16 The PTASP and referenced procedures do not sufficiently document or reference TriMet’s current processes for tracking and managing safety event-related data.
- F17 TriMet does not sufficiently document its configuration management process in the PTASP or in the referenced Configuration Management Plan (CMP).
- F18 TriMet had not updated its Internal Safety Audit Process (ISAP) document since 2016.
- F19 TriMet did not perform a complete cycle of Internal Safety Reviews (ISR) over a three-year period.
- F20 The alarm buttons in the SE Bybee Station south and NE 82<sup>nd</sup> Station elevators were inoperable.
- F21 TriMet does not have a formalized program document for its communications asset maintenance.
- F22 TriMet has not updated its Track Maintenance Standards since 2014.
- F23 The Inspection section of the Track Maintenance Standards should include items for inspectors to review, not the design standards for building new tracks.
- F24 The TriMet track standards are based on the FRA 213 Track Standards but should be refined to include standards for TriMet tracks (e.g., embedded tracks) that are not necessarily 213-compliant.
- F25 There is a lack of document/version control for Traction Power Substation (TPSS) and Overhead Catenary System (OCS) maintenance policies/procedures located on TriNet.
- F26 Maintenance of Way (MOW) Training is not utilizing a formalized training program document (Power: OCS/Substations)
- F27 MOW Training does not have a defined syllabus (curriculum) outlining standards or grading and testing procedures for its training program (Power: OCS/Substations)
- F28 On the monthly, quarterly, and annual highway grade crossing inspection forms there are inconsistencies in the use of “C” in the “Action” field; “N/A” or a dash are being used alternatively.
- F29 ODOT was unable to locate two quarterly switch inspection checklists for May and November 2023 at Expo Center in the paper records at Rose Quarter.
- F30 MOW Training is not utilizing a formalized training program document (Traction Power and Signals)
- F31 MOW Training does not have a defined syllabus (curriculum) outlining standards or grading and testing procedures for its training program (Traction Power and Signals)

**Accidents and causal factors**

In 2023, TriMet MAX vehicles were involved in twenty-five accidents. FTA and Oregon SSOA define an accident as any event involving a rail transit vehicle or occurring on a rail transit-controlled property; accident subtypes are included in the table below. The FTA and Oregon SSOA also designate some collisions as incidents, not accidents; the incident designation is reserved for low-speed collisions that don’t result in serious injury or property damage.

| <b>Event Type- Accident</b>   | <b>Calendar Year</b> | <b>Calendar Year</b> |
|---|----------------------|----------------------|
| <b>Accident sub-type</b>  | <b>2023</b>          | <b>2022</b>          |
| Fatality, a death or suicide  | 1                    | 1                    |
| Serious Injury  | 1                    | 0                    |
| All collisions resulting in fatality  | 2                    | 2                    |
| All collisions resulting in serious injury  | 2                    | 2                    |
| All collisions resulting in substantial damage  | 13                   | 15                   |
| Runaway Train   | 0                    | 0                    |
| A collision between two rail transit vehicles   | 1 (MAX vs Streetcar) | 0                    |
| Evacuation for a life safety reason   | 4                    | 5                    |
| Derailment  | 1                    | 2                    |
| <b>Incident sub-type</b>  |                      |                      |
| Collision - Certain low-speed collisions that result in non-serious injury or property damage | 16                   | 22                   |

Accidents that are collisions with substantial damage occur with the greatest frequency. Approximately sixty-eight percent of accidents are caused by motorists making unlawful turns or moves across the path of the MAX train at non-gated crossings. Collisions with serious injury and fatality generally involve persons trespassing in the MAX right-of-way. In 2023, a TriMet MAX collided with a Portland Streetcar in the Portland Lloyd District. The TriMet MAX Operator left the NE 7<sup>th</sup> Avenue & NE Holladay Street station on a stop train signal, colliding with the streetcar. The investigation revealed several contributing factors, including possible fatigue-related distraction, a history of stop signal violations by the MAX Operator, allowable streetcar speed in the area, and a visual obstruction at this location. As of this writing, both TriMet and Portland Streetcar are conducting a safety risk assessment of all crossings where both intersect. Oregon SSOA issued formal directives to both agencies including the lowering of speeds and the installment of stop markers (for Portland Streetcar) and a directive addressing the behavioral practice of moving any train beyond a stop marker until the stop signal has completely phased to a proceed signal (for TriMet and Portland Streetcar).

Incidents that are low-speed collisions which result in non-serious injury or property damage are generally caused by motorists making unlawful turns and moves across the path of the MAX train. Many of these low-speed collisions occur in the downtown Portland area, known as the ‘central business district’ or CBD, spanning from SW Goose Hollow to Lloyd Center. Currently, only about 40 percent of MAX trains are equipped with in-cab forward facing cameras. As a result, some accident investigations can be complicated by the lack of video to substantiate or validate what involved parties report. The introduction of new Type 6 light rail vehicles will replace all non-camera equipped Type 1 light rail vehicles, and TriMet has committed to installing in-cab forward facing cameras on the older Type 3 fleet by end of 2025. By then, approximately sixty-five percent of the MAX fleet will be equipped with forward facing cameras.

The Oregon SSOA may join with the RFGPTS in investigating accidents or may conduct its own independent investigation when deemed necessary. FTA requires that Oregon SSOA adopt a final accident investigation report whether produced by Oregon SSOA or the RFGPTS. Generally, Oregon SSOA delegates the accident investigation to the RFGPTS since the RFGPTS has subject matter experts employed within the agency; additionally, RFGPTS staff can respond quickly to accidents and collect time sensitive electronic data from the MAX train. Oregon SSOA compliance specialists visit most accident scenes shortly after they occur to conduct safety assessments. The assessment focuses on operating characteristics of MAX train operators, traffic patterns, lane markings, driver behavior, train and traffic light sequencing and phasing, pedestrian behavior, and installed pedestrian safety devices and treatments. For the MAX vs. Streetcar collision, Oregon SSOA Compliance Specialists were on-scene and participated and oversaw the development of each agency’s final accident investigation report.

The Program Standard includes investigatory requirements for all accidents, and Oregon SSOA only accepts final reports produced by the RFGPTS that comply with the guidelines therein; otherwise, the report is returned to the RFGPTS for revision. Oregon SSOA approved and adopted all RFGPTS final accident investigation reports from 2023.

### **Corrective Action Plans**

Corrective Action Plans are designed to address hazards or deficiencies that cannot be immediately mitigated. These are usually identified upon discovery of a previously unknown hazard, and from accident investigations, observations or reviews, drills or exercises, hazard investigations, the safety risk management process, and internal and external safety audits and reviews performed by the RFGPTS, the SSOA, or another agency, such as FTA or NTSB.

In 2023, a total of three CAPS were opened:

- CAP 13702      TriMet did not conduct internal reviews for all elements of their PTASP (also noted in Triennial Audit)
  
- CAP 13722      TriMet must complete development and implementation of its Configuration Management Plan (also noted in Triennial Audit)
  
- CAP 13682      Control Center Management and OCC personnel require additional training regarding enforcement of stop work practices when unsafe work practices are discovered. This finding was determined by a TriMet conducted internal audit.

### **Public Transportation Agency Safety Plan, changes in 2023**

Annually, TriMet is required to revisit its PTASP for updates. In 2023, PTASP updates included reassignment of the Accountable Executive from the General Manager to the Chief Operating Officer. Some clarifications to the internal safety review processes and the CAP development processes were made, and TriMet modified its Hazard Risk Index to localize decision making to the lower rungs of the agency (*i.e.* Safety Committees).

TriMet's first PTASP was approved by Oregon SSOA in December 2020. Each year, TriMet has made changes to its PTASP and Oregon SSOA expects changes to continue, but eventually subside as TriMet's PTASP becomes fully integrated into all facets of the agency. FTA expects that an agency the size of TriMet could take up to seven years to fully incorporate SMS and the concept of safety risk management into the DNA of the agency. Each year, Oregon SSOA reviews all changes made to the PTASP, ensuring that changes comply with current FTA requirements and applicable Oregon SSOA Program Standard requirements.

## **2. Portland Streetcar**

Portland Streetcar is owned and operated by the City of Portland in partnership with TriMet, which contributes a portion of operating funds. TriMet also provides operational and maintenance support. The City of Portland contracts with Portland Streetcar, Inc. (PSI), to construct and promote the Streetcar system. PSI is a private, non-profit corporation. Thus, the Streetcar is staffed by a combination of City of Portland employees, TriMet employees, and PSI personnel.

PSC is managed by the Portland Bureau of Transportation (PBOT), under the direction of the Commissioner-in-Charge of Transportation. The Commissioner-in-Charge of Transportation has appointed a Citizen Advisory

Committee to advise the Commissioner, City Council, and PSC management on matters involving planning, design, and operation of the system.

### **SSOA Oversight Activities 2023**

#### **Field Inspections/Observations/Evaluations**

The PSC streetscape is very different than TriMet's light rail system. PSC runs almost exclusively in mixed use traffic. There are very few dedicated train signals for streetcars; streetcars follow traffic signals for most of their routes. PSC employees are subject to agency rules, procedures, and processes, but they also are subject to rules of the road. Oregon SSOA inspections and observations of PSC, therefore, are somewhat different than TriMet's, so oversight in the field is different.

Most inspections were comprised of routine monitoring of PSC operations. In total, SSOA inspectors made twenty-five field visits to Portland Streetcar in 2023. Items inspected included station platforms, traffic lane and streetcar lane markings, and rail employee adherence to rail operating rules, train orders, and traffic laws. Oregon SSOA staff attended fifty-nine meetings at PSC during 2023 covering a wide variety of topics, including PTASP update meetings, safety committee meetings, status check-in meetings for corrective actions plans, and reviews of changes to policy documents and plans.

#### **Oregon SSOA Triennial Review of Portland Streetcar**

Oregon SSOA conducted a triennial review of PSC in 2023, as required by the applicable regulations. Every three years, the Oregon SSOA must conduct a triennial review of the agency's implementation and adherence to the PTASP and compliance to processes, rules, and procedures established by PSC, in addition to requirements of the Oregon SSOA Program Standard, 49 CFR Parts 40, 655, 670, 672, 673 and 674, and the OARs. The audit identified fourteen areas on non-compliance, resulting in CAPs. Each CAP is summarized below:

- 24-1 The PSC Safety Committee Charter needs to reflect an equal split between management and labor.
- 24-2 PSC did not distribute the 2023 PTASP, SOP Manual or Rulebook to Maintenance personnel.
- 24-3 The SOP Manual distribution process and tracking of changes needs improvement.
- 24-4 The RTA Hazard Log is missing completion dates for some mitigations.
- 24-5 PSC does not define how its internal auditor is technically qualified to perform safety reviews.
- 24-6 The PTASP does not accurately reflect the role of the Accident Review Board
- 24-7 A frequency for emergency drills and exercises is not established.
- 24-8 The Drug and Alcohol program references are outdated.
- 24-9 The FTA Drug and Alcohol Decision Tree is not correct.
- 24-10 Scheduled maintenance for the wheel truing machine was not completed on-time.
- 24-11 The streetcar vehicle tracking system used by Streetcar Controllers has technical glitches preventing Streetcar Controllers from seeing their location on screen.
- 24-12 PSC does not have a maintenance standard for embedded track.
- 24-13 Tool calibrations do not control all required tools.
- 24-14 PSC's asset management program does not record all maintenance activities performed by partner agencies.

The majority of corrective actions required will be resolved in the July 2024 update of Portland Streetcar's PTASP. Most findings require clean-up or clarification to administrative processes and procedures. The 2023 triennial review is the first performed since the finalization of FTA Rule 49 CFR Part 673 Public Transportation Agency Safety Plans.

**Accidents and causal factors**

In 2023, streetcars were involved in fourteen accidents. FTA and Oregon SSOA define an accident as any event involving a rail transit vehicle or occurring on a rail transit -controlled property; accident subtypes are included in the table below. The FTA and Oregon SSOA also designate some collisions as incidents, not accidents; the incident designation is reserved for low-speed collisions that don’t result in serious injury or property damage.

| <b>Event Type – Accident</b>  | <b>Calendar Year</b>    | <b>Calendar Year</b> |
|---|-------------------------|----------------------|
| <b>Accident sub-type</b>  | <b>2023</b>             | <b>2022</b>          |
| Fatality, a death or suicide  | 0                       | 0                    |
| Serious Injury  | 0                       | 0                    |
| All collisions resulting in fatality  | 0                       | 0                    |
| All collisions resulting in serious injury  | 0                       | 0                    |
| All collisions resulting in substantial damage  | 13                      | 4                    |
| Runaway Train   | 0                       | 0                    |
| A collision between two rail transit vehicles   | 1 (TriMet vs Streetcar) | 0                    |
| Evacuation for a life safety reason   | 0                       | 0                    |
| Derailment  | 0                       | 1                    |
| <b>Incident sub-type</b>  |                         |                      |
| Collision – Certain low speed collisions that result in non-serious injury or property damage | 33                      | 39                   |
|   |                         |                      |

Approximately seventy percent of streetcar collisions were caused by motorists either turning in front of the streetcar or side-swiping the streetcar as it traveled alongside it. In 2023, PSC completed installation of continuously flashing LED lights on both sides of the streetcar to mitigate side-swiping collisions; data is still being collected to measure effectiveness.

Oregon SSOA conducts safety assessments following most accidents at PSC. Given that the streetcar’s operating environment is primarily in city traffic, recommendations from Oregon SSOA are generally forwarded by PSC to PBOT. PBOT is responsible for the application of new pavement markings (such as lane delineators) and the maintenance of current applications. Following the TriMet and Streetcar collision, ODOT issued two directives to Portland Streetcar. Directive 1 requires a safety risk assessment of streetcar speed from the NE 7<sup>th</sup> & Holladay station to the MAX Crossing (where the accident occurred) and the addition of new berthing (stop) markers in the area. Additionally, Directive 2 (issued to both TriMet and PSC) addressed the behavior of operator’s leaving stations before signals are fully phased to a permissive/proceed signal.

Oregon SSOA approved and adopted all accident reports submitted by PSC in 2023.

**Corrective Action Plans**

Corrective Action Plans (CAPs) are designed to address hazards or deficiencies that cannot be immediately mitigated. These are usually identified because of discovering a previously unknown hazard, an accident investigation, observations or reviews, drills or exercises, hazard investigation, the safety risk management process, and internal and external safety audits and reviews performed by the RFGPTS, the SSOA, or another agency, such as FTA or NTSB.

In 2023, three CAPS were opened, which are summarized below:

CAP 23-02      A collaborative effort with Multnomah County and Portland Streetcar to develop processes following any Broadway Bridge Lift.

CAP 23-03      PSC to clarify safety performance targets and utilization by regional partners in planning.

CAP 23-04      PSC to resume production of the annual collision report required by the PTASP.

PSC continues progress toward completion of one existing CAP that originated in 2013. The CAP is for interior and exterior cameras to be installed on the streetcar fleet. Currently, streetcars do not have this type of recording equipment. The addition of the equipment will be instrumental when investigating accidents and all other safety events involving streetcar vehicles. By December 2024, PSC expects to have cameras installed on all 16 vehicles.

### **Public Transportation Agency Safety Plan, changes in 2023**

Annually, PSC is required to revisit its PTASP for updates. PSC's first PTASP was approved by Oregon SSOA in December 2020. Each year, PSC has made changes to its PTASP and Oregon SSOA expects some minor changes to continue. At this point, PSC has a functional safety committee aligned with new FTA regulations and is implementing the safety risk management process and principles across operations and maintenance divisions; there were only minor changes in the revised 2023 version. Overall, PSC continues integrating and refining the PTASP and safety risk management principles into the organization. Each year, Oregon SSOA reviews all changes made to the PTASP, ensuring that changes comply with current FTA requirements and applicable Oregon SSOA Program Standard requirements.

### **3. The Astoria Riverfront Trolley**

The Astoria Riverfront Trolley (ART) is a heritage trolley located in Astoria, Oregon. The ART provides service along Astoria's Riverfront from the trolley barn located near Hamburg Street, to the East End Mooring Basin near 39<sup>th</sup> Street. The track, right-of-way, and trolley barn are owned by the City of Astoria. The Riverfront Trolley Association, Inc., is a nonprofit organization that owns and operates ART under the umbrella of the City of Astoria and the authority of the City Council. The city reserves the decision-making authority for right-of-way and track design and configuration through its City Manager. The City Manager has assigned responsibility for these items to the Public Works Director of the City of Astoria.

In 2023, the trolley resumed in March and continued limited operations along the route. The Buoy Beer building roof collapse in June of 2022 continued severance of the trolley route, limiting operation between Basin Street and 6<sup>th</sup> Street. The shortened route was operated Friday, Saturday, and Sunday until the beginning of September, after which it ran weather permitting through Christmas.

ODOT Rail conducted one track inspection in 2023. Most findings included insufficient fasteners at rail joints along the trolley route. SSOA also conducted an Hours-of-Service review, in addition to a training document review; there were no findings of non-compliance.

The ART is a volunteer organization with three paid positions: a trainer, a scheduler, and a bookkeeper. Volunteers cover several duties, including motormen, conductors, maintenance workers, advertising, and merchandise positions. The ART is self-supporting; it does not receive funding for operations from the city. Its revenues include fares, advertising, charter fees, donations, and sales of trolley memorabilia. It receives a small matching grant from the urban renewal district for capital items.

### **4. Willamette Shore Trolley**

The Willamette Shore Trolley (WST) had been providing scenic trolley rides on a six-mile section of a historic rail line between Lake Oswego and Portland, Oregon, since 1987 and is operated by volunteer members of the Oregon Electric Railway Historical Society (OERHS, a not-for-profit Oregon Corporation, 501(c)(3)). The Willamette Shore Trolley is owned by the City of Lake Oswego.

In 2023, WST operated from Memorial Day thru mid-October, Saturday and Sunday only, Noon to 3pm, but on a shortened route from Lake Oswego thru the Riverwood neighborhood, then back to Lake Oswego. The shortened route is due to Trestles along the line being out-of-service. Oregon SSOA conducted a track inspection in 2023 with two findings -- four bad rail ties and one insufficient fastener at a rail joint.

Because neither Trolley system receives funding from FTA, they are not subject only to the state regulations. As a result, Oregon SSOA must bill both ART and WST for its oversight.

## **G. SSOA Planned Activities: 2023-2024**

In addition to daily oversight functions, Oregon SSOA's primary goal in 2023 is to continue to revise the Program Standard and OARs to comply with FTA's new risk-based inspection requirements and other FTA rules. Other activities include:

- Approving and overseeing RFGPTS CAPs resulting from the 2023 TriMet and Portland Streetcar Triennial Audits;
- Regular inspections of RFGPTS operations;
- Regular inspections of TriMet track structures and systems and compliance to on-track safety;
- Preparing the SSOA and each RFGPTS for FTA's risk-based inspection requirements;
- Rewriting the OARs and Program Standard to comply with new risk-based inspection requirements;
- Rewriting the OARs and Program standard to comply with changes to 49 CFR Parts 672, 673 & 674;
- PTASP reviews;
- Working toward closing FTA audit findings;
- Assimilating consultant support into the Oregon SSOA Program.