



**Pennsylvania Department of
Transportation State Safety
Oversight Agency
(PennDOT SSOA)**

2023 Annual Report
July 18, 2024

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
BUREAU OF RAIL, FREIGHT, PORTS, & WATERWAYS
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Acknowledgements

In accordance with Title 49 of the Code of Federal Regulations, Part 674.13(a)(7), attached is the Calendar Year 2023 Report of State Safety Oversight Activities for Rail Fixed Guideway Public Transportation Systems in Pennsylvania. The Pennsylvania Department of Transportation (PennDOT) Bureau of Rail, Freight, Ports, and Waterways, State Safety Oversight Division developed the Annual Safety and Security Report for Pennsylvania's State Safety Oversight Agency (SSOA).

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Contents

SSOA State Safety Oversight Program	4
Executive Summary	5
Federal Transit Administration (FTA) Coordination	7
Oversight Program Activities	9
Establishment of SSO Division	9
Safety Management Inspection	9
Public Transportation Agency Safety Plan (PTASP)	10
Safety Management Systems	10
Hazard Identification	10
SSOA Risk Based Inspection Program	10
Safety and Security Certification and Capital Project Oversight	11
Safety Training	12
Events	13
SSOA Investigation Process	13
2023 Reportable Events	13
2023 Occurrence Reporting	15
Safety and Security Reviews	16
Triennial Audits	16
Triennial Audit Checklist Updates	18
Data or Information for Hazard Identification (DIHI)	18
SSOA Operation and Station Inspections	18
Corrective Action Plans	19
Security and Emergency Preparedness Efforts	22
System Security and Emergency Preparedness Plan (SSEPP)/Security and Emergency Preparedness Plan (SEPP)	22
Looking Forward	23

SSOA State Safety Oversight Program

The Federal Transit Administration (FTA) delegates oversight of rail fixed guideway public transportation systems that operate with federal financial assistance authorized under 49 United States Code Chapter 53 to the states. This structure requires states to designate a state safety oversight agency (SSOA) to fulfill the requirements of the state safety oversight program, codified in 49 Code of Federal Regulation (CFR) Part 674, referred to as Part 674 hereafter.

In response to a National Transportation Safety Board (NTSB) investigation following a deadly Southeastern Pennsylvania Transportation Authority (SEPTA) accident in 1990, the Governor of the Commonwealth of Pennsylvania created the Rail Transit Safety Review Program (RTSRP) within the Pennsylvania Department of Transportation (PennDOT). The RTSRP is now known as the PennDOT SSOA. PennDOT SSOA has served as Pennsylvania's safety and security oversight for the state's rail transit agencies (RTAs) since 1991 – well before the FTA issued the first federal rule, 49 CFR part 659, in 1995, which went into effect in 1997.

On March 16, 2016, FTA issued the 49 CFR Part 674 final rule to replace 49 CFR Part 659. This rule standardized SSOAs across the country by requiring financial, legal, operational, and administrative independence from the transit agencies they oversee. Part 674 also enhanced investigative and enforcement authorities, training requirements and required annual reporting to the Governor, the FTA, and the board of directors of the RTAs. The FTA certified Pennsylvania's SSOA under 49 CFR Part 674 on April 24, 2018.

The Pennsylvania SSOA oversees the Cambria County Transit Authority (CamTran) in Johnstown, Pittsburgh Regional Transit (PRT) in Pittsburgh, and SEPTA in Philadelphia.



Information regarding the SSOA, along with a method to report an allegation of non-compliance to the SSOA, can be found on the PennDOT website at <https://www.penndot.pa.gov/Doing-Business/Transit/Pages/state-safety-oversight.aspx>. The SSOA issues its annual Program Standard with input from each of the RTAs. The 2023 Program Standard included major updates such as:

- Changed Rail Transit Safety Review Program (RTSRP) to Pennsylvania Department of Transportation State Safety Oversight Agency (PennDOT SSOA).
- Added requirement for agency Accountable Executives to take the TSI "SMS Awareness" course and RTA-specific SMS training.
- Clarified Data or Information for Hazard Identification requirements and reporting timelines.

- Updated the risk-based assessment program to start the transition to the new risk-based inspection federal requirements.
- Required RTA corrective action plan (CAP) updates to monthly instead of quarterly.
- Added a Safety and Security Certification Required Documentation Form to be submitted by the RTAs with their Major Capital Project updates.
- Added RTA Safety Committee requirements.
- Added requirement for RTAs to submit monthly SMS implementation and KPI updates.
- Clarified reporting requirements related to event investigations and proposed CAPs.
- Expanded and clarified language for Safety and Security Certifications.
- Added the PennDOT SSOA escalation procedures for quality, quantity, and timeliness.

The SSOA partners with covered RTAs to conduct proactive safety and security oversight. In addition, the SSOA utilizes opportunities with each of the RTAs to share effective practices and provide technical assistance and ongoing support in monitoring hazardous conditions and investigating safety events. The SSOA chairs a monthly cross-agency meeting to discuss SSOA activities and initiatives and to encourage sharing rail transit safety and security information and effective practices throughout the Commonwealth.

The PennDOT SSOA is also an active member and the 2023 Vice-President of the Transit Safety Oversight Association (TSOA), which is a non-profit organization built to serve professionals in the transit safety oversight field. TSOA's purpose is to support, encourage, develop, and enhance transit safety among SSOAs throughout the country through its national safety policy analysis, communication, education, and training opportunities.

The PennDOT SSOA has been overseeing rail transit safety for over three decades and continues to fulfill FTA-required program elements under Moving Ahead for Progress in the 21st Century, which encompasses 49 CFR Parts 672, 673, and 674, as well as advanced supplemental safety and security practices and standards in response to the unique aspects of Pennsylvania's RTAs. The SSOA assumes oversight responsibility for a range of procedural developments, evaluation activities, and safety and security programs, and is working with covered agencies on the implementation of safety management systems (SMS) and the development of the new federally mandated Risk-Based Inspection Program to proactively identify potential hazards for continuous improvement of the safety and security of RTA operations.

Executive Summary

The 2023 Pennsylvania SSOA Program Standard applies to the CamTran Inclined Plane; PRT's Blue Line, Red Line, Silver Line, and Monongahela Inclined Plane; and SEPTA's Broad Street Line, Market-Frankford Line, Media-Sharon Hill Line, Norristown High Speed Line, Route 15 Trolley, and Subway-Surface Lines. As part of its jurisdiction, the SSOA also oversees dedicated busways and stations and maintenance facilities related to rail transit and busway operations.

Throughout 2023, the SSOA worked collaboratively with CamTran, PRT, and SEPTA to continuously improve safety and security. The SSOA met with agency representatives through formal monthly, quarterly, and annual meetings. The SSOA also regularly attended meetings

hosted by the RTAs to address and monitor safety and security concerns. SSOA oversight efforts included developing and issuing SSO Program Standards, reviewing and approving agency safety and security plans; fulfilling Part 672 training certification requirements; monitoring safety and security certification processes for several capital projects; investigating events; refining the risk-based inspection program for federal compliance; conducting audits and inspections, working with agency personnel to implement corrective actions; and engaging in discussions about security and emergency preparedness.

In 2023, the SSOA made significant strides in updating its triennial audit checklists to align with RTAs' Public Transportation Agency Safety Plans (PTASPs) and integrate SMS implementation details. These checklists will undergo annual updates in conjunction with PTASP revisions. The SSOA also expanded its Data or Information for Hazard Identification (DIHIs) process to identify potential safety hazards that, while compliant with the PTASP, could lead to injury, damage, or environmental harm. In 2023, 40 DIHIs were open, with SEPTA accounting for 39 of these. PennDOT identified one at PRT, which closed in February 2024. Throughout 2023 SEPTA and PennDOT worked together to assess DIHI to close out or acknowledge them. Additionally, PRT addressed the DIHI identified in 2023.

Operations and stations safety inspections remained a key activity, with extensive reviews conducted at SEPTA and PRT. Notably, the SSOA conducted on SEPTA 205 reviews of operational movements between stations and 157 reviews of individual stations; the SSOA conducted on PRT 28 and 26, respectively. These reviews took place across each line in the PennDOT and PRT systems. PennDOT expanded the use of LIDAR for speed reviews, with 20 total reviews conducted. The PennDOT SSOA also actively managed the Corrective Action Plans (CAPs) alongside the RTAs, who are required to submit CAPs for review within 30 days of the deficiency being identified. At the beginning of 2023, CamTran had two open CAPs, PRT had 14 open CAPs, and SEPTA had 65 open CAPs; at the end of 2023 CamTran had zero open CAPs, PRT had 20 open CAPs, and SEPTA had 103 open CAPs. CAP proposals are developed by the responsible RTA for review and approval by the SSOA. CAPs and all subsequent updates and closure verifications are tracked through an electronic SMS database, facilitating streamlined management and automatic alerts.

Additionally, following major SEPTA safety events in the summer of 2023, the FTA initiated a Safety Management Inspection (SMI) in August 2023. Activities for Phase 1 of the SMI spanned September 2023-December 2023, with FTA personnel traveling onsite for interviews, field reviews, and Roadway Worker Protection (RWP) training. The focus areas of the SMI were SEPTA's rail and bus operations (not overseen by PennDOT SSOA) and the effectiveness of oversight activities conducted by PennDOT. Both the PennDOT SSOA and SEPTA participated in FTA's onsite activities, follow-up virtual interviews, and the provision of requested documents. In 2024, Phase two will entail the issuance of FTA's SMI report with special directives, which will require the development and implementation of corrective actions to resolve FTA-identified deficiencies.

Looking ahead to 2024, the SSOA will focus on finalizing a risk-based inspection (RBI) program manual and increasing resources to enhance the necessary support for the SMI anticipated follow-ups as well as RBI data management, and increased field presence. The PennDOT SSOA will be instituting new CAP management requirements in the Program Standard that will include the RTA's accountable executive to review and approve all CAPs that address findings rated as "high" or "serious" and the approval of all CAP time-extension justifications that would go beyond a one-year time period from the date of CAP approval. The PennDOT SSOA will also work on updating all Standard Operating Procedures (SOPs) and other documentation to ensure compliance with several major regulatory changes that FTA is issuing. These initiatives aim to bolster safety and security across all covered RTAs, ensuring continuous improvement and compliance with regulatory standards.

Federal Transit Administration (FTA) Coordination

Throughout 2023, the SSOA coordinated with the FTA through monthly calls to share programmatic updates on oversight activities; solicit guidance on regulations, standards, and effective practices; review events; and discuss RBIs and relevant safety advisories and safety directives.



Image 1. Subway-Surface Trolleys at the Elmwood Trolley Depot. April 9, 2024.

The PennDOT SSOA and RTA representatives attended the 2023 FTA Joint SSO and RTA Hybrid Workshop in November in St. Louis, Missouri. During the workshop, the SSOA team received updates on the Special Directive Risk-Based Inspection programs to be submitted for certification in 2024, the FTA's enforcement actions and the use of safety management inspections, Bipartisan Infrastructure Law (BIL) and rulemaking initiatives, overview of data from the National Transit Database, managing safety at rail grade crossings, hazard reporting, transit worker and customer assaults, overview of the National Transportation Safety Board (NTSB), and updates from the Transportation Security Administration (TSA) regarding baseline assessment of security enhancement (BASE) program and cybersecurity for transit.

The SSOA also submitted the annual report to the FTA using their State Safety Oversight

Reporting (SSOR) platform, which compiles safety data on SSO activities and records the SSO Program Manager's certification of compliance with applicable regulations.

The partnership between the SSOA and covered RTAs, along with the FTA coordination, continues to focus on achieving the highest levels of safety and security practicable, benefiting RTA patrons and employees, and the public.



Image 2. Market-Frankford Line car at the 56th Street station. April 29, 2024.

Oversight Program Activities

Establishment of SSO Division

Effective January 16, 2021, Elizabeth (Beth) Bonini became the Division Chief for PennDOT's newly created SSO Division, and supervises two SSO regional management positions, and consultant safety staff. The creation of this Division and support positions has been a long time in the making and demonstrates the Department's commitment to rail safety in Pennsylvania. Ms. Bonini has managed the SSOA since 2008 and is a World Safety Organization Certified Safety Executive and a founding member and the 2023 Vice-President of the Transit Safety Oversight Association (TSOA). In addition, Ms. Bonini has a Transit Safety and Security Program (TSSP)-Rail Certification and holds training certificates that comply with the Public Transportation Safety Certification Training Program (PTSCTP), 49 CFR Part 672, as authorized by 49 U.S.C. § 5329(c)(1).

In May 2023, PennDOT filled the two regional management positions to oversee safety and security in the eastern and western regions of the Commonwealth. Regional managers completed the PennDOT SSOA onboarding training, as well as enrolled and began to complete the PTSCTP required training. Both regional managers are well positioned to complete the required training in advance of the three-year mandatory deadline and have been critical members of the SSOA team since their employment.

Safety Management Inspection

From July to August 2023, SEPTA experienced numerous major safety incidents, including bus collisions, trolley collisions, and a trolley runaway/derailment event. On August 10, 2023, the FTA initiated a Safety Management Inspection (SMI) through a notification to the PennDOT Secretary and SEPTA Accountable Executive. The PennDOT's Deputy Secretary for Multimodal Transportation was designated by the Secretary as the SMI Point of Contact. Phase 1 of the SMI began in September 2023 and continued through the end of December 2023. The FTA and their consultant support staff attended Roadway Worker Protection (RWP) training, conducted interviews, field reviews, and document reviews both virtually and in-person. The focus areas of the SMI were SEPTA's rail and bus operations and the effectiveness of oversight activities conducted by the PennDOT SSOA. The SMI activities of SEPTA's bus operations are outside the scope and authority of the PennDOT SSOA and are under the purview of FTA's authority. The PennDOT SSOA and SEPTA participated in FTA's SMI activities (bus and rail), follow-up virtual interviews, and the provision of requested documents. FTA hosted an exit interview on January 30, 2024. In 2024, Phase 2 will entail the issuance of FTA's SMI report with special directives, which will require the development and implementation of corrective actions to resolve FTA-identified deficiencies.

Public Transportation Agency Safety Plan (PTASP)

Throughout 2023, the SSOA worked with the covered RTAs to ensure compliance with 49 CFR Part 673.11(a)(5), which requires that each transit agency conduct an annual review and update of the agency's PTASP. The 2023 SSOA Program Standard also provided the RTAs further clarification of the Safety Risk Management (SRM) process requirements and dedicated significant work hours towards assisting RTAs with technical guidance in updating their PTASPs with compliant and practical language. In 2023, the SSOA approved both PRT's and CamTran's updated rail transit PTASPs. SEPTA's 2023 rail transit PTASP required major updates in areas of safety risk management (SRM), employee safety reporting, safety committees, and SMS implementation, which were realized in their 2024 PennDOT SSOA approved PTASP.

Safety Management Systems

SMS implementation at each covered agency continues to be a focus of the PennDOT SSOA, including monthly and quarterly RTA meetings with standing agenda items to review status and progress. The SSOA supports RTAs in satisfying requirements promulgated by the FTA in accordance with Parts 673, including flexibility in the plan and progress at each RTA.

In 2023, RTAs provided positive updates on the status of SMS implementation through increased employee training, moving forward with the procurement of software designed to improve the collection and use of safety data for analysis and focused safety activities, and the promotion and enhancement of employee reporting systems. The PennDOT SSOA also executed additional focus on SMS implementation during triennial audits and has been able to verify an increase and more in-depth implementation of SMS activities during safety audits and inspections.

Hazard Identification

The SSOA regularly conducts unannounced inspections of operator activities and station conditions. These inspections are compiled into Operations and Stations Review Memorandums and sent to RTAs to correct the identified safety concerns and determine if there are systemic safety concerns. In 2023, the SSOA began enhancing these operations and station inspections using a web-based reporting application. This new methodology creates a database of inspection information to identify trends and hotspots in operator performance and station conditions. This data can then be compared to the internal reviews conducted by the RTA for further identification of hazards.

SSOA Risk Based Inspection Program

The SSOA continued to develop its proposed RBI program during 2023. On October 21, 2022, the FTA issued Special Directive 22-44 to PennDOT, which requires the development and implementation of an RBI program. The FTA issued a similar special directive to every SSOA across the country. In 2023, the SSOA started updating its Program Standard and completed a draft of its Risk-Based Inspection Program Manual to meet the requirements of Special Directive 22-44. Ahead of the 2024 submission of the RBI Manual, the SSOA has met with both the FTA

and the RTAs to present its Program Standard updates and Risk-Based Inspection Program Manual to address Categories 1, 2, 3, and 4 of their RBI Toolkit.

PennDOT SSOA's RBI program will be an ongoing process using data-driven decision-making, in addition to analysis of individual events, to assess the safety and security of RTA maintenance and operations practices. Through the RBI program, the SSOA will use data to proactively identify potential hazards that require further oversight or investigation. The program will ensure continuous monitoring of higher risk rules compliance with ongoing maintenance, operations, and safety activities.

A critical component of the SSOA RBI program is the identification and reporting of key performance indicators (KPIs). In this context, SSOA KPIs are defined as quantifiable measures used to evaluate success in meeting objectives for performance. KPIs are tracked for each RTA and reported monthly. Figure 4 depicts examples of KPI source data that are used in the RBI program. In 2023, the SSOA reported on monthly KPIs including rules compliance violations, CAP status, triennial audit results, event analysis, near miss events, track fires, fatigue, and red signal violations.

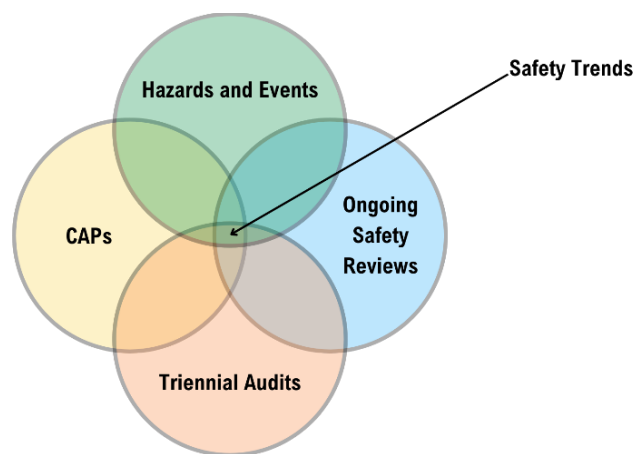


Figure 1. KPI Source Data

Safety and Security Certification and Capital Project Oversight

Each covered RTA is required to have a safety and security certification (SSC) process to ensure that hazards, threats, and vulnerabilities are adequately addressed prior to the initiation of passenger operations for new starts and major projects to extend, rehabilitate, or modify or replace existing systems, vehicles, or equipment. The SSOA is responsible for overseeing safety certification at covered agencies and ensuring that SSC plans and documents submitted by an agency are aligned with the agency's program requirements. SSC oversight for projects falls under the criteria specified within the SSOA Program Standard. The SSOA recognized the importance of ensuring safety and security for the capital projects and created a formalized process that includes input from each RTA to complete a comprehensive assessment using a PennDOT SSOA checklist to evaluate capital projects for an initial SSC determination. Current SSCs being overseen by the PennDOT SSOA include CamTran's Inclined Plane rehabilitation; PRT's upgrade to its automatic trip stop system; SEPTA's implementation of communications-based train control on the Media-Sharon Hill Line (MSHL); and SEPTA's trolley modernization program. The King of Prussia rail extension project that the SSOA oversaw in 2022 was canceled in 2023.

PennDOT SSOA oversight activities include attending design and hazard analysis meetings and reviewing safety certification documentation such as safety and security certification plans; certifiable elements lists; reliability, availability, and maintainability plans; hazard logs; hazard analyses; and failure mode, effects, and criticality analyses. The SSOA also tracks progress by attending project meetings and SSC committee meetings, and through status updates at monthly and quarterly meetings.

Safety Training

The SSOA has long incorporated safety training in its familiarization and training program for staff. Since the release of Part 672, the SSOA expanded on its training program and formalized many of the activities through the development of an SSOA Qualifications and Training Program (QTP), building upon the FTA required Technical Training Plan (TTP) for each SSOA employee. The SSOA Program Standard requires training for both RTAs and the SSOA, including both federally mandated and PennDOT SSOA-specific training. The SSOA continues to offer and conduct its “SSO 101” and Safety and Security Certification familiarization training for RTAs.

Members of the SSOA must complete the PTSCPT and the TSSP training programs through the TSI within three years of their designation and must recertify every two years. Additionally, members of the SSOA team are required to complete specific training requirements to supplement the FTA-required training and familiarize SSOA personnel with program-wide principles. Furthermore, the SSOA continues to work with agency personnel to participate in RTA-specific training to become increasingly familiar with the unique aspects of each transit system. In 2023, the SSOA onboarded the two new PennDOT Regional Managers, as well as seven new members from the consultant team as per the SSOA-specific training described in the QTP. Additionally, the SSOA also attended red signal violation training for all modes, SEPTA's emergency safety training, MSHL book of rules and Broad Street Line (BSL) book of rules training.

The SSOA also works with the RTAs to integrate the requirements for initial and refresher safety training for designated safety critical personnel into existing training programs at the RTAs. As an example of this effort, the SSOA provided a tailored version of the SSO 101 familiarization training to SEPTA operations management personnel at the request of the agency's Chief Operating Officers.

RTA-led training that the SSOA completed in 2023 included RWP training at both SEPTA and PRT and book of rules training at SEPTA. In 2024, the SSOA will continue efforts to attend and complete relevant safety, security, operations, and maintenance training at RTAs.

Events

SSOA Investigation Process

In accordance with SSOA Program Standards and Part 674, the SSOA is responsible for the investigation of safety events, as well as the review of all hazard analysis and mitigation activities. With few exceptions, the SSOA delegates investigation authority to covered RTAs, who conduct investigations for review and adoption by the SSOA. Similarly, the SSOA requires agencies to identify, report, and analyze hazards during transit operations.

Based on RTA event notifications, investigations, and hazard analyses, the SSOA monitors a wide range of investigative activities, beginning with the event itself and culminating with the determination of a probable cause and the development of CAPs to mitigate the possibility of recurrence. The SSOA and covered agencies work collaboratively throughout all stages of the investigation process. Typically, the SSOA receives an initial event notification from an RTA safety representative, at which point the SSOA begins to work alongside the agency investigator to conduct the investigation. The SSOA's process for adopting and closing an investigation includes reviewing the corresponding investigation report and ensuring that information is thorough and accurate. Investigations must include a probable cause and identify CAPs as appropriate. The SSOA provides a status report to all the RTAs weekly, which outlines new, adopted, rejected, and ongoing investigations.

During 2023, the SSOA continued to utilize information gained from a 2022 comprehensive review and analysis of event data for 2019-2022 at SEPTA. The identification of trends for repeat events (such as the locations and time of day for incidents including close-clearance collisions and falls to the track) continues to aid SEPTA in the development of appropriate corrective actions and mitigations and the SSOA in the determination of risk-based inspection activities.

2023 Reportable Events

In accordance with SSOA and FTA requirements, RTAs must report accidents to the SSOA within two hours and incidents within 24 hours of their occurrence. In 2023, PRT reported 86% of events within the prescribed reporting window, and SEPTA reported 93% of events within the prescribed reporting window. In 2023, the SSOA reviewed 220 event investigation reports for adoption from PRT, SEPTA and CamTran.

Figures 2 and 3 on the following page depict the reportable event breakdown at PRT and SEPTA, respectively. Unexpected Service Shutdown was the most common reportable event at PRT, while Serious Injury was the most common reportable event at SEPTA.

In 2023, the SSOA formally approved the CAPs from an NTSB investigation of a collision between a CSX train and SEPTA trolley that occurred in December of 2021. The SSOA also participated

in an NTSB investigation following a SEPTA runaway trolley event that occurred on July 27, 2023, which is still ongoing.

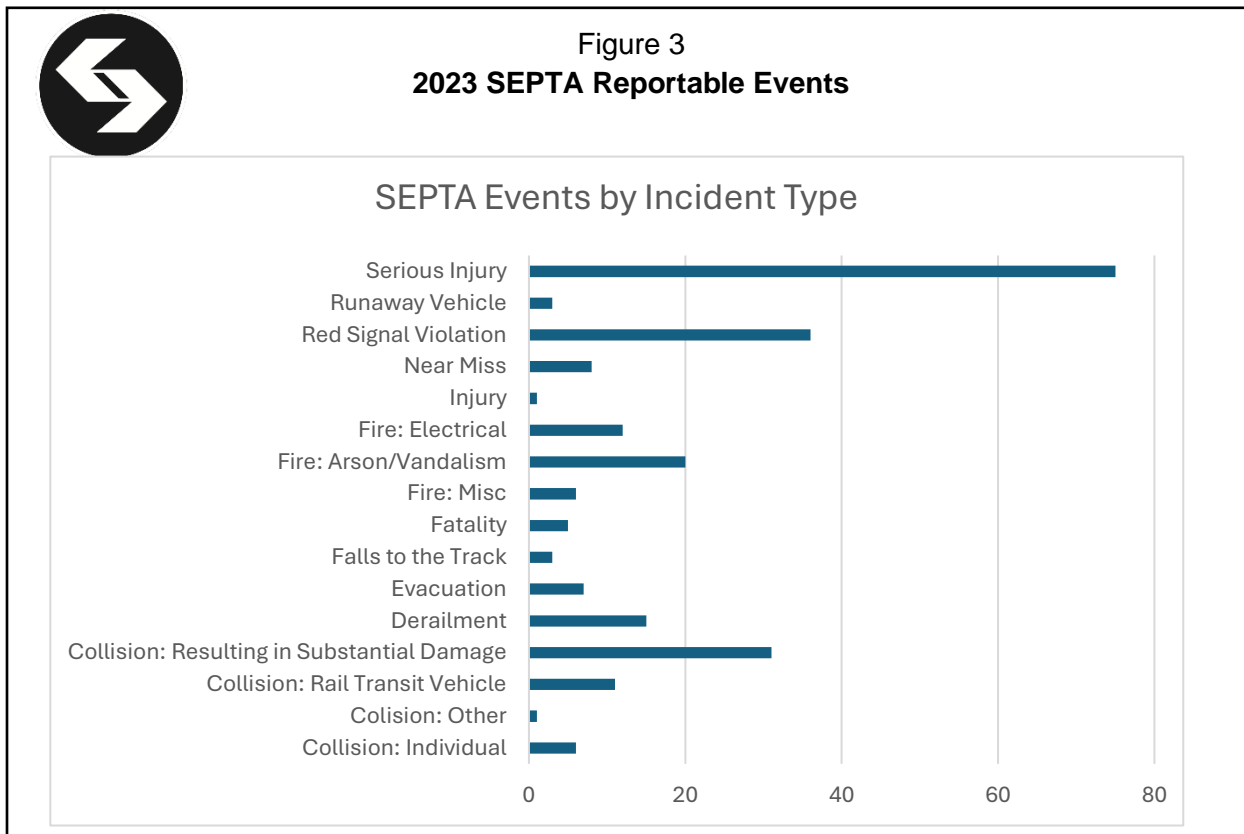
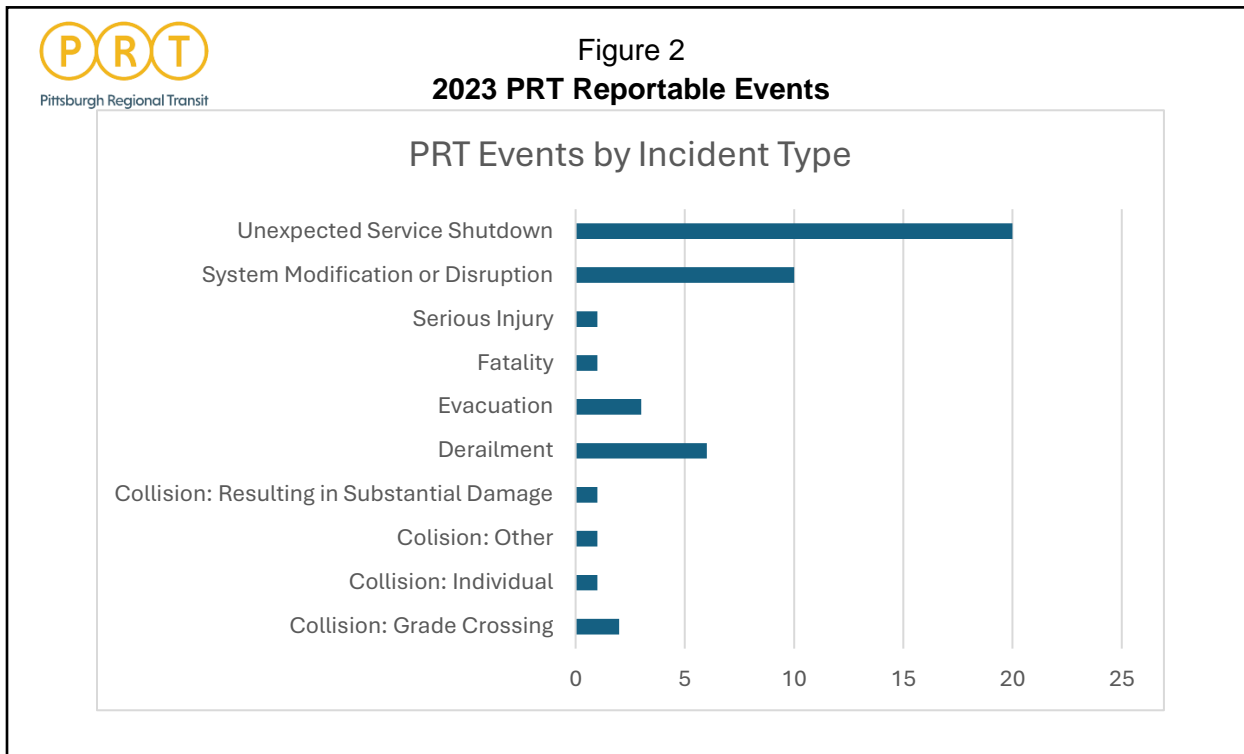




Image 3. Norristown High Speed Line car at the Norristown Transportation Center. April 29, 2024.

2023 Occurrence Reporting

In 2023, the SSOA monitored occurrences at covered RTAs based on the reporting thresholds outlined in the SSOA Program Standard. Though many of the occurrences do not meet the threshold for FTA safety event reporting, occurrences are reportable to the SSOA in a monthly report. This rigorous reporting standard allows for trend analyses to support proactive mitigation and focused inspections of these occurrences before they result in more serious safety events.

Table 1 represents the agencies’ reported occurrences to the SSOA in 2023. Most occurrences reported in 2023 were related to trespassing.

Table 1 Occurrences Reported to the SSOA in 2023				
	CamTran	PRT	SEPTA	Total
Trespassing	0	58	1170	1228
Collision: Other	0	1	0	1
Elevator/Escalator Injury	0	0	21	21
Unacceptable Hazard <i>As defined by the RTAs’ PTASPs</i>	0	12	0	12
Door Event	0	0	10	10
Total	0	71	1201	1272

Safety and Security Reviews

Triennial Audits

The SSOA performs triennial safety and security audits at each of its covered RTAs on an ongoing basis over a three-year cycle. In 2023, the SSOA continued its 2022-2024 triennial audit cycle. Triennial audits include a comprehensive document and record review, interviews, and field observations when warranted. SSOA audits are informed by Pennsylvania requirements, federal regulations, and industry effective practices, and they focus on compliance with the RTA's procedures and plans. The triennial audit process is outlined in Figure 5.

The process by which audits are conducted remains consistent with prior years; however, specific topics are being audited under the SMS framework. The SSOA continued SMS-based auditing in 2023 and released updated triennial audit checklists for each audit using the PTASP review checklist as a foundation. Additionally, the SSOA continued its extensive update focused on SMS and agency-specific checklists for audits going forward. Utilizing the SMS checklists allows the SSOA to perform Part 674 compliant audits and assist the covered RTAs in identifying any gaps related to SMS, as well as ensuring each RTA is performing in accordance with their PTASP. A specific example of the SSOA conducting SMS-based audits, is through the specific use of safety assurance, which is a specific component of SMS in the audit process. The team will do a review of past audits, inspections, opened and closed CAPs, DIHI, and observations related to the audited topic and conduct safety assurance evaluations to ensure that corrective actions have remained in place and there are no repeat safety concerns.

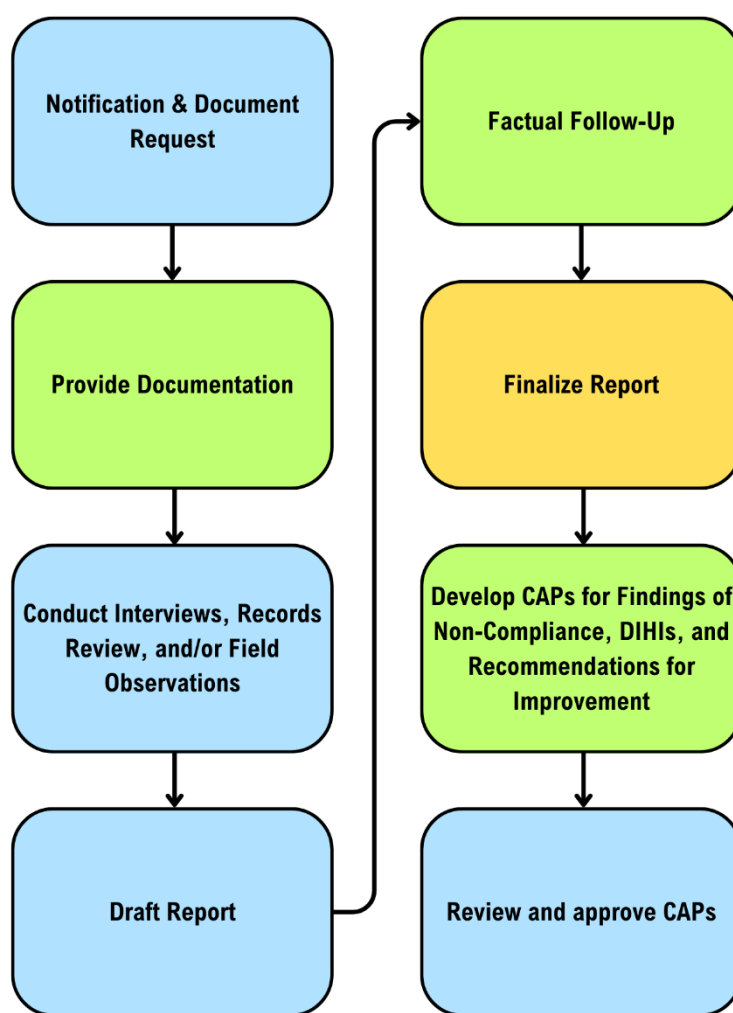


Figure 4. Triennial Audit Process

Audits by the SSOA may cover PTASP and Security and Emergency Preparedness Plan (SEPP) implementation broadly, or they may focus on a narrow range of issues of a more technical matter based on previous audits. In 2023, the SSOA completed seven safety triennial audits at PRT, covering the following topics: Rules Compliance Operations Training Program, Accident Investigation Process, RWP Program, Elevator and Escalator Maintenance, Maintenance Training, Power Inspection Maintenance, and Safety Assurance processes.

The SSOA completed six safety triennial audits at SEPTA, covering the following topics: Accident Investigation Process, Operations Training Program, Power Maintenance, City Transit Division (CTD) Stations Maintenance, Structures, and Communications Maintenance and Processes.

The SSOA put triennial audits of CamTran on hold until the system reopens, so the SSOA conducted no audits in 2023, but a 2024-2026 audit cycle is scheduled, and oversight of the SSC is ongoing.

The SSOA attends and monitors internal safety and security audits at each covered agency and tracks CAPs that arise from these internal audits conducted by the RTA. In 2023, the SSOA oversaw or reviewed 18 internal audits at PRT and 19 at SEPTA. Like triennial audits by the SSOA, internal audits of CamTran were put on hold until the system reopens, so CamTran did not conduct audits in 2023, but a 2024-2026 internal audit cycle was developed.

Table 2 shows the 2023 audit activity at each RTA and Table 3 shows the total number of Findings of Non-Compliance from SSOA triennial audits.

Table 2 Audits Performed in 2023			
	CamTran	PRT	SEPTA
SSOA Safety Audits	0	9*	8**
SSOA Security Audits	0	1***	0

*One of the nine safety audits was performed in 2022 and the final report was issued in 2023; one of the nine safety audits was performed in 2023 and the final report was issued in 2024.

**Two of the eight safety audits were performed in 2022 and final reports were issued in 2023; two of the eight safety audits were performed in 2023 and the final reports were issued in 2024.

***This PRT security audit was performed in 2023 and the final report was issued in 2024.

Table 3 Findings of Non-Compliance from Audits Performed in 2023			
	CamTran	PRT	SEPTA
SSOA Safety Audits Findings	0	14	38
SSOA Security Audits Findings	0	2	0

Triennial Audit Checklist Updates

In 2023, the SSOA continued to update its triennial audit checklists to better align with the RTAs’ PTASPs. The SSOA continued to review each section of the agencies’ updated PTASPs to ensure that every aspect is included in agency-specific checklists. Additionally, the SSOA incorporated further information regarding SMS implementation into the checklists. The checklists will be updated annually when agencies update their PTASPs.

Data or Information for Hazard Identification (DIHI)

The SSOA tracks DIHIs, which refers to data and/or information that is technically compliant with an RTA’s PTASP but has been identified to present a real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a public transportation system; or damage to the environment. Once a DIHI is reported, the RTA must use their documented safety risk management process to determine if a hazard has been identified and conduct a subsequent safety risk assessment. If the safety risk assessment determines a hazard rating that is reportable to the SSOA per the Program Standard, then the RTA will be required to follow the CAP process. All other identified hazards will be mitigated and monitored through the RTA’s safety risk management process outlined in the PTASP.

Table 4 shows the total DIHIs that remained open at each RTA as of December 31, 2023, as well as the total DIHIs that were closed in 2023. PennDOT SSOA identified the open DIHI from PRT during an SSOA Triennial Audit of the PRT Power Inspection and Maintenance Program, which closed in February 2024.

Table 4 DIHIs as of December 31, 2023				
	CamTran	PRT	SEPTA	Total
Open	0	1	34	35
Closed in 2023	2	5	0	7

SSOA Operation and Station Inspections

The SSOA operations and stations safety inspections are an essential part of the SSOA ongoing safety oversight activities to observe compliance with applicable safety rules and identify potential hazards. The SSOA conducted operations and stations reviews at covered modes at SEPTA and PRT throughout 2023. The data and observations collected by the SSOA during operations and stations reviews is consolidated in a database and the SSOA analyzes the operations and stations review data for trends; this effort will help to inform the SSOA’s risk-based inspections. The SSOA sent all observations made during operations and stations reviews to the RTAs via electronic memos. Any safety critical concerns are communicated immediately with agency safety

personnel, control center personnel, or agency police, according to the Operations and Stations Review SOP. Additionally, in 2023, the SSOA continued use of a light detection and ranging (LIDAR) speed detection device and trained additional team members to use it for speed reviews on covered modes at SEPTA and PRT.

Of note, as part of SEPTA’s SMS implementation, they created an email list-serve with staff responsible for the review of these SSOA reports, in real time, so any identified hazards are addressed as appropriate.

Table 5 shows the total operations and stations reviews completed for PRT and SEPTA in 2023.

Table 5 Operations, Stations, and LIDAR Reviews Performed in 2023		
	PRT	SEPTA
Operation Reviews	28	205
Station Reviews	26	157
LIDAR Reviews	8	12

Corrective Action Plans

Covered RTAs are required to develop CAPs for various deficiencies and hazards identified through triennial audits, event investigations, hazard reports, rules compliance monitoring, and inspections. All CAPs must be submitted to the SSOA for review and approval within 30 calendar days of an identified deficiency. Subsequently, the SSOA is responsible for reviewing, approving, and verifying implementation. The CAP process is depicted in Figure 6.

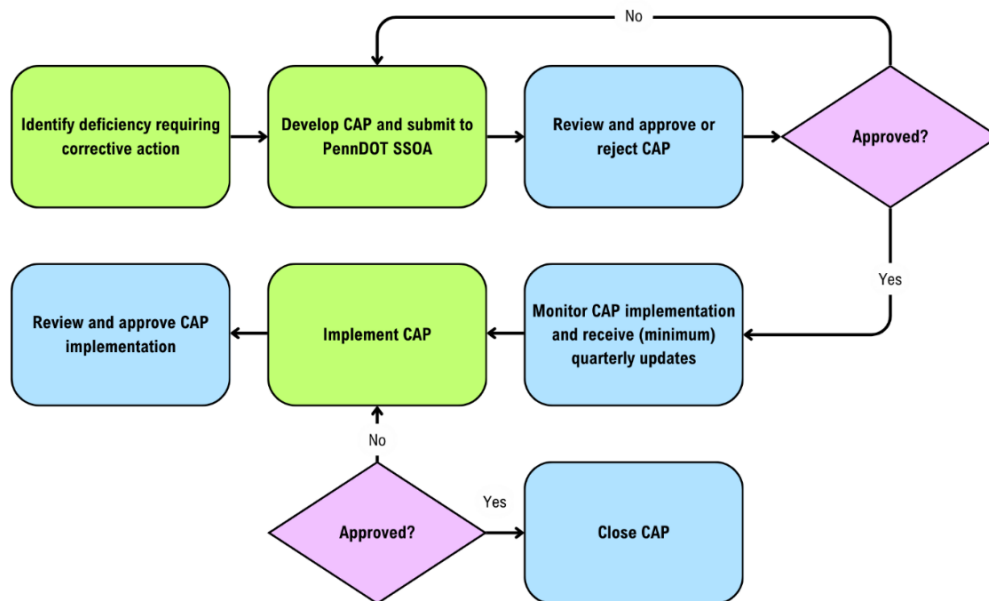


Figure 5. Corrective Action Plan (CAP) Process

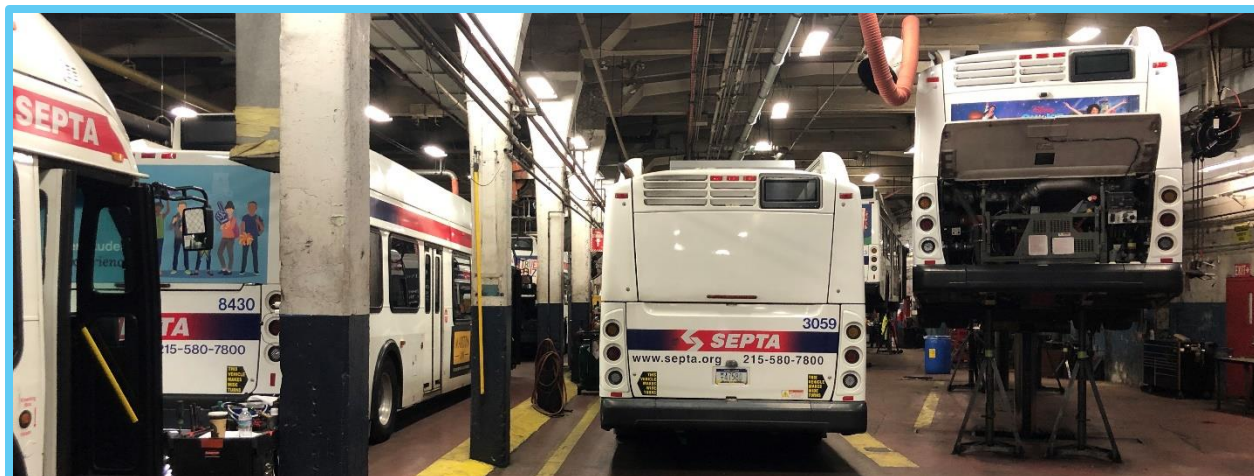



Image 4. Callowhill Bus Maintenance Facility. April 25, 2024.


The SSOA reviews the status of CAPs with RTA safety and security personnel and other responsible departments, as appropriate, on an ongoing basis, but also works with RTAs at least monthly to update all CAPs. During these updates, RTA and SSOA personnel review progress towards the closure of open CAPs and identify documentation required to verify implementation. Verification may consist of field reviews, record reviews, photographs, and/or plan, policy, or procedure revision. Tables 6, 7, and 8 display the number of open and closed CAPs per year for CamTran, PRT, and SEPTA, respectively.

		Table 6 CamTran CAPs by Year as of December 31, 2023						
SSOA Approval Date		2018 & Before	2019	2020	2021	2022	2023	Total
Open		0	0	0	0	0	0	0
Closed in 2023		1	0	1	0	0	0	2

As of December 31, 2023, CamTran had zero open CAPs and was able to close two CAPs.

		Table 7 PRT CAPs by Year as of December 31, 2023						
SSOA Approval Date		2018 & Before	2019	2020	2021	2022	2023	Total
Open		1	0	0	1	1	17	20
Closed in 2023		2	1	0	3	6	4	16

As of December 31, 2023, PRT had 20 open CAPs and was able to close 16 CAPs.

		Table 8 SEPTA CAPs by Year as of December 31, 2023						
SSOA Approval Date		2018 & Before	2019	2020	2021	2022	2023	Total
Open		7	7	0	19	22	48	103
Closed in 2023		5	1	0	14	28	13	61

As of December 31, 2023, SEPTA had 103 open CAPs and was able to close 61 CAPs.

The SSOA tracks all CAPs for each covered transit agency through an electronic SMS database. This database allows the SSOA to track CAP information and updates in a streamlined manner, as well as manage all forms of electronic verification materials, perform analyses, and disseminate automatic alerts surrounding upcoming closure. From the SMS database, the SSOA and the RTAs can also review KPIs of CAPs to assess areas where attention may need to be focused. The hazard ratings of open CAPs as of December 31, 2023, are depicted in Table 9, and the sources of open CAPs are shown in Table 10.

Table 9 Hazard Ratings of Open CAPs as of December 31, 2023				
	CamTran	PRT	SEPTA	Total
High	0	0	2	2
Serious	0	0	12	12
Medium	0	5	85	90
Low	0	15	4	19
Total	0	20	103	123

Table 10 Source of Open CAPs as of December 31, 2023				
	CamTran	PRT	SEPTA	Total
RTA Internal Audit	0	0	5	5
SSOA Audit	0	14	27	41
Reportable Hazard	0	3	6	9
Accident/Incident	0	3	42	45
SSOA Inspection	0	0	19	19
*Other	0	0	4	4
Total	0	20	103	123

*Any other hazard or safety concern that requires a corrective action.

Security and Emergency Preparedness Efforts

Although the FTA relinquished its security oversight with the release of Part 674, they retained emergency preparedness as an SSO federal responsibility as part of each agency's PTASP. The SSOA has opted to maintain security oversight of its covered agencies, while working with the TSA as necessary to ensure that SSOA requirements do not conflict with those of the TSA. The SSOA continues to perform triennial audits of the RTA's security and emergency preparedness plan (SEPP), participates in any internal security audits, threat and vulnerability assessments (TVAs), drills and exercises, and other security and emergency preparedness related items.

System Security and Emergency Preparedness Plan (SSEPP)/Security and Emergency Preparedness Plan (SEPP)

The SSOA received the 2023 revisions of the System Security and Emergency Preparedness Plan (SSEPP) for SEPTA, and the Security and Emergency Prepared Plans (SEPPs) for PRT and CamTran. In accordance with the SSOA Program Standards, the SSOA reviews the plans and either approves or rejects them for use. The SSOA compared the RTAs' SSEPP/SEPPs with the SSOA Program Standard and applicable checklist created from tools provided by the FTA. After SSOA internal review, the SSOA found that each plan met current requirements and approved them for use. The SSOA approved each RTAs SSEPP or SEPP on the following dates:

- CamTran: PennDOT SSOA approved the SEPP on June 16, 2023
- PRT: PennDOT SSOA approved the SEPP on October 12, 2023
- SEPTA: PennDOT SSOA approved the SSEPP on November 3, 2023

Looking Forward



Image 5. Media Sharon Hill Route 101 trolley at Lansdowne station. April 24, 2024.

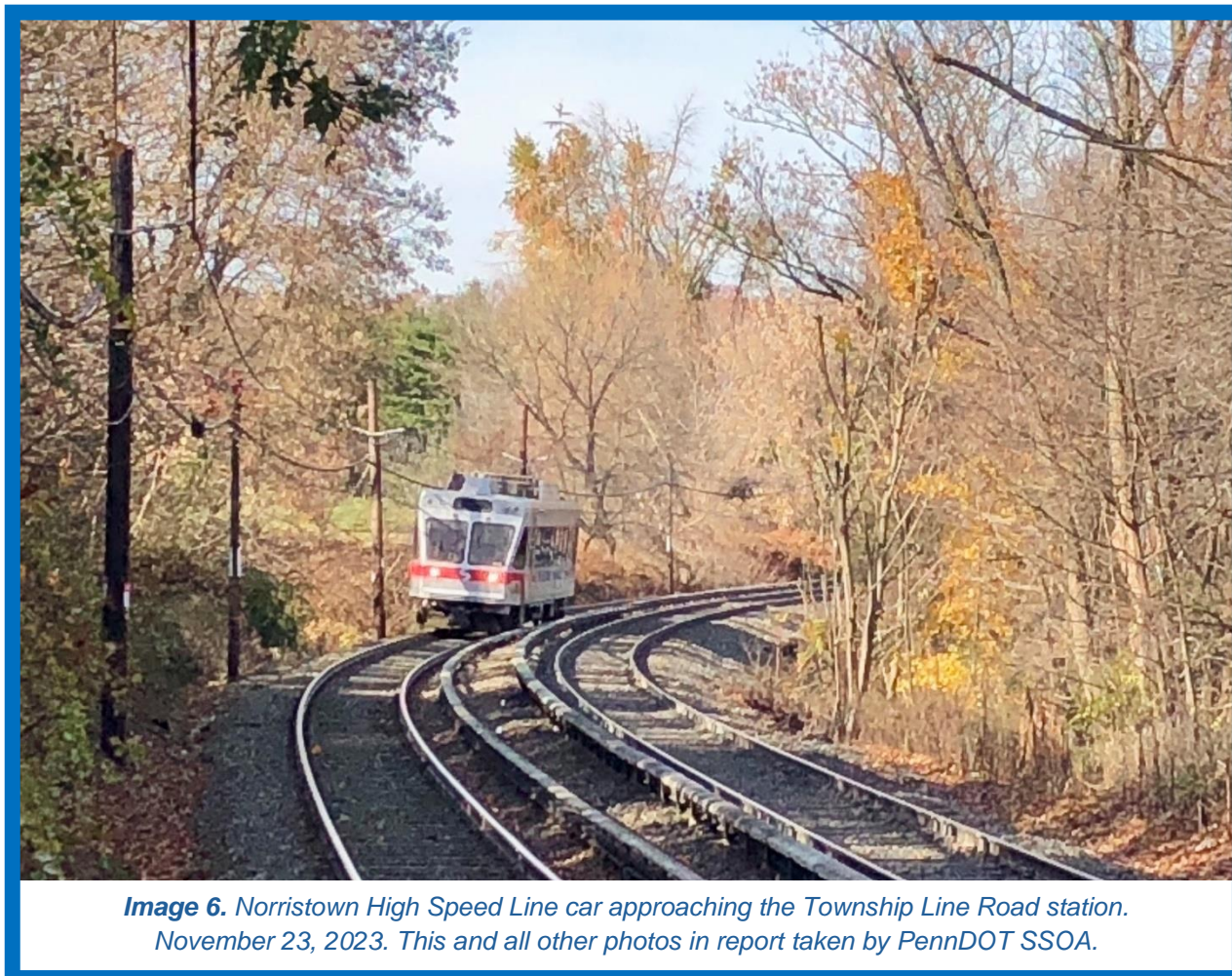
In 2024, the SSOA will continue to work closely with its covered RTAs regarding safety and security initiatives. The SSOA's focus areas for 2024 include the following:

RBI Program Development. The SSOA will submit its RBI Manual to the FTA in 2024 and begin implementing the policies and procedures listed in the manual. To achieve the data-driven aims of the RBI Program, the SSOA will hire staff with technical skills in data analysis and modeling.

Data Collection, Analysis, and Transmittal. The SSOA will continue to build a robust data collection and monitoring program with its RTAs and utilize the expertise of data analysts to determine capabilities for RBI program improvement. Relatedly, the SSOA will continue to build out its data storage platform and memo/report automations for a streamlined process.

RTA Coordination. The SSOA will continue its field presence and coordination with RTAs and look to expand SMS implementation within the agencies. For the SSOA, this will include analyzing hazard trends, assessing risk through data modeling, examining the connection between events and CAPs, and determining best practices regarding CAP closure to share with the other RTAs. Further, the SSOA will engage in more hands-on knowledge sharing with the RTAs, such as an exchange where the SSOA provides technical assistance to the RTAs and in turn the SSOAs attend more technical training at the RTAs. Finally, the SSOA aims to develop a DIHI standard operating procedure (SOP) and host a DIHI workshop with the RTAs in 2024.

Update SSOA Documentation. The SSOA will continue to update its Organization Chart, Program Standards, Standard Operating Procedures (SOPs), and ID documentation.



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