



Pennsylvania Department of Transportation (PennDOT)  
State Safety Oversight Agency (SSOA)  
2022 Annual Report

July 10, 2023

**PENNSYLVANIA DEPARTMENT OF TRANSPORTATION  
BUREAU OF RAIL, FREIGHT, PORTS, & WATERWAYS  
400 NORTH STREET, 7TH FLOOR  
HARRISBURG, PA 17120**



# Acknowledgements

---

In accordance with Title 49 of the Code of Federal Regulations, Part 674.13(a)(7), attached is the Calendar Year 2022 Report of State Safety Oversight Activities for Rail Fixed Guideway Public Transportation Systems in Pennsylvania. The Annual Safety and Security Report for Pennsylvania's State Safety Oversight Agency (SSOA) was developed by the Pennsylvania Department of Transportation (PennDOT) – Bureau of Rail, Freight, Ports, and Waterways, State Safety Oversight Division.

## **PENNSYLVANIA DEPARTMENT OF TRANSPORTATION**

Michael B. Carroll, Secretary of Transportation  
Meredith Biggica, Deputy Secretary – Multimodal Transportation  
Elizabeth Bonini, WSO-CSE, Division Chief, State Safety Oversight

## **CAMBRIA COUNTY TRANSIT AUTHORITY**

Rose Lucey-Noll, Executive Director  
Robert Johnson, Chief Operating Officer

## **PORT AUTHORITY OF ALLEGHENY COUNTY doing business as PITTSBURGH REGIONAL TRANSIT**

Katharine Eagan Kelleman, CEO  
Burt Jennings, Chief Safety Officer, System Safety  
Matt Porter, Chief of Police, Port Authority Police Department

## **SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY**

Leslie S. Richards, General Manager  
Ronald Keele, Chief Safety Officer, System Safety  
Charles Lawson, Chief of Police

# Contents

---

|   |    |
|---|----|
| SSOA State Safety Oversight Program .....                 | 5  |
| 2022 SSOA Summary .....                                   | 6  |
| FTA Coordination.....                                     | 7  |
| Program Level Activities .....                            | 7  |
| Establishment of SSO Division .....                       | 7  |
| Federal Transit Administration Audit of the Program ..... | 8  |
| SSOA Strategic Plan .....                                 | 8  |
| Oversight Activities.....                                 | 8  |
| Public Transportation Agency Safety Plan .....            | 8  |
| Safety Management Systems.....                            | 9  |
| Hazard Identification .....                               | 9  |
| Safety Certification and Capital Project Oversight.....   | 10 |
| Safety Training .....                                     | 10 |
| Events .....  | 11 |
| SSOA Investigation Process .....                          | 11 |
| 2022 Reportable Events .....                              | 12 |
| 2022 Occurrence Reporting .....                           | 15 |
| Safety and Security .....                                 | 16 |
| Reviews .....   | 16 |
| SSOA Risk Based Inspection Program .....                  | 16 |
| Triennial Audits.....                                     | 17 |
| Triennial Audit Checklist Updates .....                   | 18 |
| SSOA Operations and Stations Reviews.....                 | 18 |

Corrective Action Plans ..... 19

Security and Emergency Preparedness Efforts..... 21

    System Security and Emergency Preparedness Plan/Security and Emergency Preparedness Plan ..... 21

Looking Forward ..... 22



# 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 the Commonwealth of Pennsylvania, the Governor created the Rail Transit Safety Review Program within the Pennsylvania Department of Transportation (PennDOT) in response to a National Transportation Safety Board (NTSB) investigation following a deadly Southeastern Pennsylvania Transportation Authority (SEPTA) accident in 1990. The RTSRP, has served as Pennsylvania's safety and security oversight for the state's rail transit agencies (RTAs) since 1991 – well before the first federal rule, 49 CFR part 659, was issued in 1995 and 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 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 their annual Program Standard with input from each of the RTAs. The update to the 2022 Program Standard included new requirements from the Bipartisan Infrastructure Law (BIL), as well as incorporated two new standard operating procedures (SOPs) developed by the SSOA: Risk-Based Assessments and Light Detection and Ranging (LIDAR) Reviews.

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 continues to chair a monthly cross-agency meeting to discuss SSOA activities and initiatives, as well as to encourage sharing rail transit safety and security information and effective practices throughout the Commonwealth.

The Pennsylvania SSOA has been overseeing rail transit safety for over three decades and continues to fulfill FTA-required program elements, which encompasses 49 CFR Parts 672, 673, and 674, as well as advance 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) to

proactively identify and mitigate hazards, improving the safety and security of their operations.

## 2022 SSOA Summary

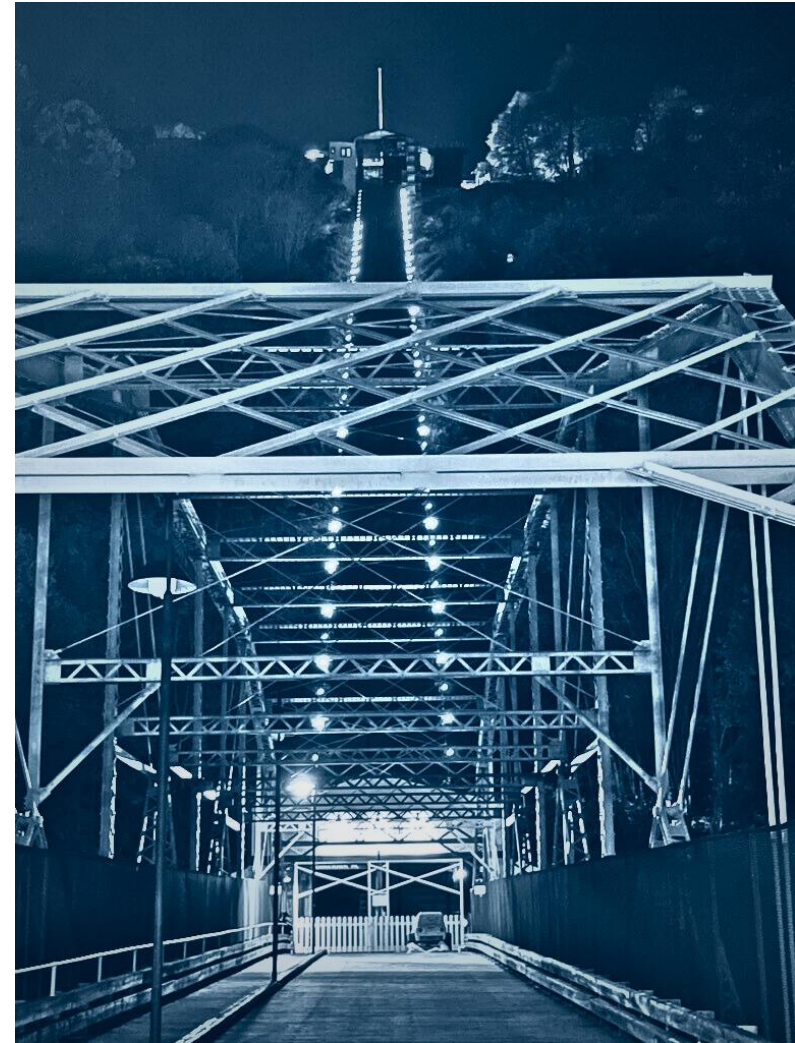
The 2022 Pennsylvania SSOA Program Standard applies to the CamTran Inclined Plane; PRT's Blue Line, Red Line, Silver Line, and Monongahela Inclined Plane, and SEPTA's Broad Street Line, Market-Frankford Line, Media-Sharon Hill Line, Norristown High Speed Line, the Route 15 trolley, and the Subway-Surface 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 2022, 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 reviewing and approving agency safety and security plans; fulfilling Part 672 recertification requirements; monitoring safety and security certification processes for several capital projects; investigating events; refining a risk-based inspection program; working with agency personnel to implement corrective actions; and engaging in discussions about security and emergency preparedness.

The SSOA continued to work with covered RTAs to implement their SMS. The SSOA also began the 2022-2024 triennial audit cycle to evaluate agency compliance with safety and security plans. The SSOA began an extensive update of its auditing checklists to further incorporate SMS principles and tailor them to each individual RTA's Public Transportation

Agency Safety Plan (PTASP). The SSOA monitored ongoing safety assurance processes and began working toward development and implementation of safety risk management expectations and training. Overall, the SSOA spent 11,928 hours performing oversight activities in 2022.



## FTA Coordination

Throughout 2022, 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 risk-based inspections and relevant safety advisories and safety directives.

SSOA and RTA representatives attended the 2022 FTA Joint SSO and RTA Hybrid Workshop in October. During the workshop, the SSOA team received updates on transit safety policy, risk-based inspections, accident investigation trends and reporting requirements, and drug and alcohol programs. Other discussion topics included the signal system safety and train control safety advisory, rail grade crossing safety, shared practices to implement FTA special directives and corrective action plan management.

The SSOA received and reviewed three safety advisories published by the FTA, including Safety Advisory 22-1: Rail Car Passenger Door Inspection and Function Testing; Safety Advisory 22-2: Signal System Safety and Train Control; and Safety Advisory 22-4: Suicide Prevention Signage on Public Transit. Additionally, the SSOA received Safety Directive 22-44: Required Actions to Implement a Risk-Based Inspection Program at the Pennsylvania Department of Transportation and began to develop an implementation plan and schedule.

The SSOA also submitted the annual report to the FTA using the State Safety Oversight Reporting 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, as well as the public. The following sections of this report provide highlights and trends related to program level activities, including the development of a strategic plan; oversight of SMS implementation; and oversight activities including safety certification oversight, safety training, reportable events and hazardous condition investigations, and safety and security reviews such as triennial audits, and security initiatives.

## Program Level Activities

---

### Establishment of SSO Division

Effective January 16, 2021, Elizabeth (Beth) Bonini became the Division Chief for PennDOT's newly created SSO Division, which supervises two new SSO positions, as well as 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. In addition, Ms. Bonini has a Transit Safety and Security Program (TSSP)-Rail Certification and is in compliance with the Public Transportation Safety Certification Training Program (PTCTP), 49 CFR Part 672, as authorized by 49 U.S.C. § 5329(c)(1).

In 2022, there were several recruitment attempts made to fill the two new SSO positions, but PennDOT was not able to attract qualified candidates with the existing salaries. After increased recruitment efforts and the approval of a more competitive salary, these regional management positions



were filled in May 2023. Job specifications are still in the process of being modified to accurately reflect the work and competitive salaries for the SSOA.

## Federal Transit Administration Audit of the Program

In June 2021, the SSOA, along with covered RTAs, took part in the FTA's triennial audit of the SSO program. After receiving the draft report from the FTA in December 2021, the SSOA responded to the FTA with factual corrections, and the FTA issued the final SSO Audit Report in January 2022. The audit resulted in four findings, to which the SSOA responded with a tracking matrix along with actions taken to address concerns arisen from the audit by March 2022. The FTA officially approved the corrective actions and closed the audit on January 9, 2023.

## SSOA Strategic Plan

In 2022, the SSOA finalized its strategic plan for the upcoming year to correspond to PennDOT's overall strategic themes and values while incorporating the principles of SMS. The SSOA will continue to monitor, evaluate, and report on progress toward the strategic plan.

# Oversight Activities

## Public Transportation Agency Safety Plan

Throughout 2022, the SSOA worked with the covered RTAs to ensure compliance with 49 C.F.R § 673.11(a)(5), which

requires that each transit agency must establish a process and timeline for conducting an annual review and update of the agency's PTASP. Additionally, the SSOA worked with the covered RTAs to ensure compliance with the BIL, which required the creation of joint labor management safety committees by July 31, 2022 and committee approval of their PTASPs by December 31, 2022. As of January 2023, the SSOA approved both PRT's and CamTran's 2022 updated PTASPs. The SSOA issued initial approval of SEPTA's PTASP in October 2022 to incorporate the BIL requirements; the SSOA awaits updates to SEPTA's PTASP to improve their safety risk management plan for final approval and continues to work with SEPTA to update their plan.

Through the development of the 2022 SSOA Program Standard, the RTAs acknowledged that further clarification of the Safety Risk Management (SRM) Process §673.25 compliance would be prioritized in the 2022 PTASP update. Under SRM, monitoring non-conformities against baseline requirements helps capture deviations that might detract from the expected effectiveness, or performance, of the safety risk mitigations. This process allows for corrective actions to address the deviations and restore effectiveness of safety risk mitigations.





## Safety Management Systems

The SSOA monthly RTA meetings have a standing agenda item to review the status of SMS implementation at each covered agency. Additionally, each agency met quarterly with the SSOA throughout 2022; during these meetings, RTAs provided updates on the status of SMS implementation, and the SSOA offered guidance and posed questions. The SSOA placed additional focus on SMS during triennial audits. In 2022, the agencies continued to make strides towards implementation of their SMS by continuing to train employees on SMS, implementing software designed to improve trending and data analysis, promoting employee reporting systems, and working toward the Transportation Safety Institute's (TSI's) TSSP and PTSCTP certifications. The RTAs are continuing to work towards the implementation of §673.31 safety plan documentation that states, "At all times, a transit agency must maintain documents that set forth its Public Transportation Agency Safety Plan, including those related to the implementation of its Safety Management

System (SMS), and results from SMS processes and activities."

The SSOA continues to support Pennsylvania RTAs in satisfying the requirements promulgated by the FTA. In accordance with Parts 673 and 674, the SSOA understands that each agency's SMS will be appropriately scaled to its operations, and as such, the SSOA will be flexible in the review and assessment of each program.

## Hazard Identification

The SSOA regularly conducts unannounced reviews of station conditions and operator activities. These reviews are compiled into Operations and Stations Review Memorandums and sent to RTAs so that they may correct any identified concerns. In 2022, the SSOA began expanding its operations and stations review program through the use of checklists via a web-based reporting application. These checklists create a database of reviews intended to identify trends and hotspots in station conditions and operator performance.

The SSOA is further expanding its use of web-based checklists to assess rule compliance in real time. As a quick reporting function, the SSOA started developing a generalized web-based checklist for the identification of hazards in the field. This checklist generates a report and tracks hazards with a unique identification number, helping to ensure that any identified hazards are subject to follow-up.



## Safety Certification and Capital Project Oversight

Each covered RTA is required to have a safety and security certification (SSC) program 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. Safety certification oversight for projects that fall under the criteria specified within the Program Standards has been an initiative of the SSOA for the last several years. Current SSC initiatives include CamTran's Inclined Plane rehabilitation; PRT's upgrade to its automatic trip stop system; and SEPTA's implementation of communications-based train control on the Media-Sharon Hill Line and the King of Prussia rail extension (monitored during 2022, however, currently on-hold). The SSOA recognized the importance of ensuring safety and security for the capital projects and mandated the formalized process. The SSOA also continued to monitor the capital programs of SEPTA and PRT for any projects that would require SSC.

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.

In 2022, the SSOA developed a safety and security certification training which was given to all current SSOA personnel and added to the SSOA onboarding training program. Beginning with the publication of the SSOA 2023 Program Standard, this training will be required for all RTA project managers when a capital project requiring safety certification begins.

## 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 member. The SSOA Program Standard requires training for both RTAs and the SSOA, including both federally mandated and Pennsylvania SSOA-specific training. In 2022, the SSOA updated its QTP and TTP and developed the PennDOT SSO Refresher Training Program. The SSOA updated SSO familiarization ("SSO-101") training used at RTAs and its Safety and Security Certification training used during the onboarding of new team members. Additionally, the SSOA began developing a safety risk management training that will be used during the onboarding of new SSOA team members.

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 are required to complete specific requirements for training related to the program and safety and security oversight 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 and

become increasingly familiar with each transit system. In 2022, the SSOA onboarded six new members of the consultant team as per the SSOA-specific training described in the QTP.

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 SSO familiarization training to both SEPTA and PRT operations management personnel at the request of the agencies' Chief Operating Officers. Additionally, the SSOA provided SSO-101 training to PRT personnel for their required PTSCTP refresher training.

RTA-led training that the SSOA completed in 2022 included roadway worker protection training at both SEPTA and PRT. In 2023, 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 hazard analysis and mitigation activities. Figure 1 depicts the reportable event notification decision tree created by the SSOA to aid in event notifications. With few exceptions, the SSOA delegates investigation authority to covered RTAs, which conduct investigations for adoption by the SSOA; similarly, the SSOA requires agencies to identify, report, and analyze hazards in the course of 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 lead SSOA Event Investigation Coordinator begins working 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 of the RTAs weekly, which outlines new, adopted, and ongoing investigations.

During 2022, the SSOA instituted a comprehensive review and analysis of event data for the prior three years at SEPTA. This enabled 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. The SSOA is now using the information gained from the data analysis to aid SEPTA in the development of appropriate corrective actions and mitigations.

## 2022 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 2022, PRT reported 100% of events within the prescribed reporting window, and SEPTA reported 90% of events within the prescribed reporting window. In 2022, the SSOA reviewed 217 event investigation reports for adoption from PRT, SEPTA and CamTran. Figures 2 and 3 on the following pages depict the reportable event breakdown at PRT and SEPTA, respectively, CamTran had one reportable event. System Modification or Disruption was the most common reportable event at PRT, while fires were the most common reportable events at SEPTA. Operating rules violations or human error accounted for 70 of 217, or 32%, of all reportable accidents and incidents in 2022.

In 2022, the SSOA also continued to participate and/or track NTSB investigations of a Norristown High Speed Line vehicle collision that occurred at SEPTA in August of 2017 and a collision between a CSX train and SEPTA trolley that occurred in December of 2021.

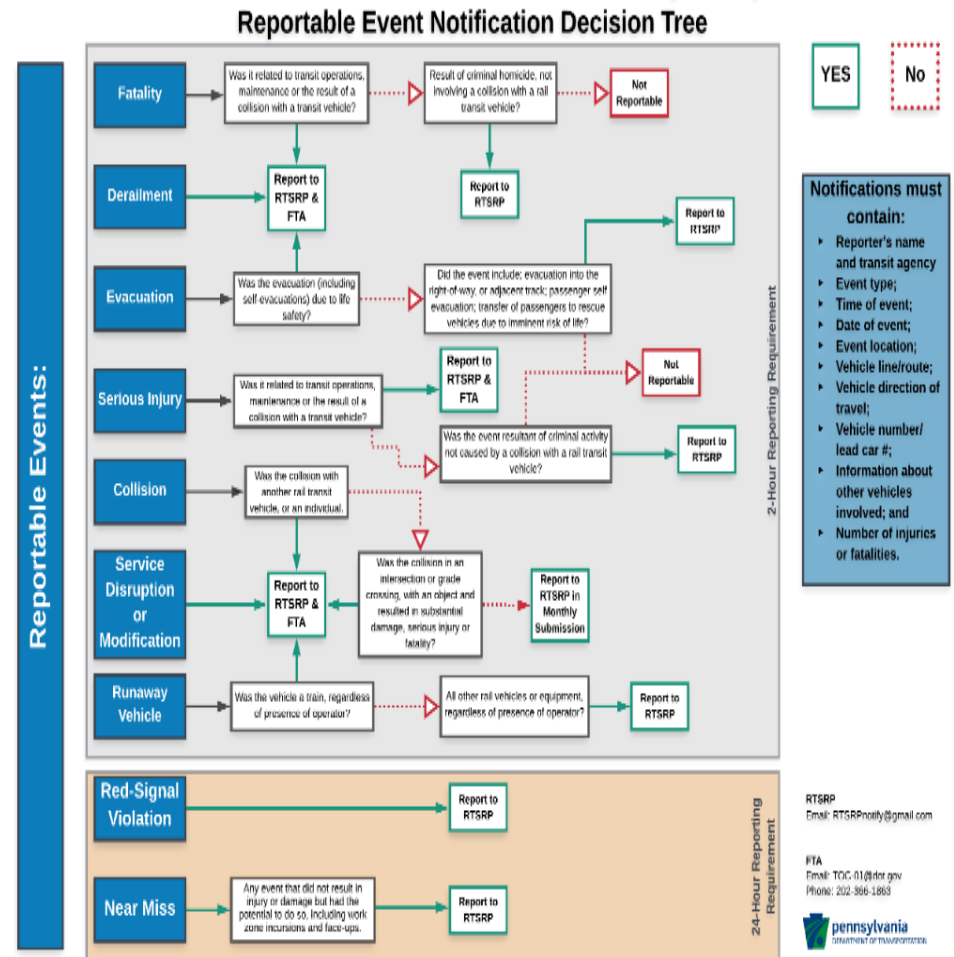


Figure 1: SSOA Reportable Event Decision Tree



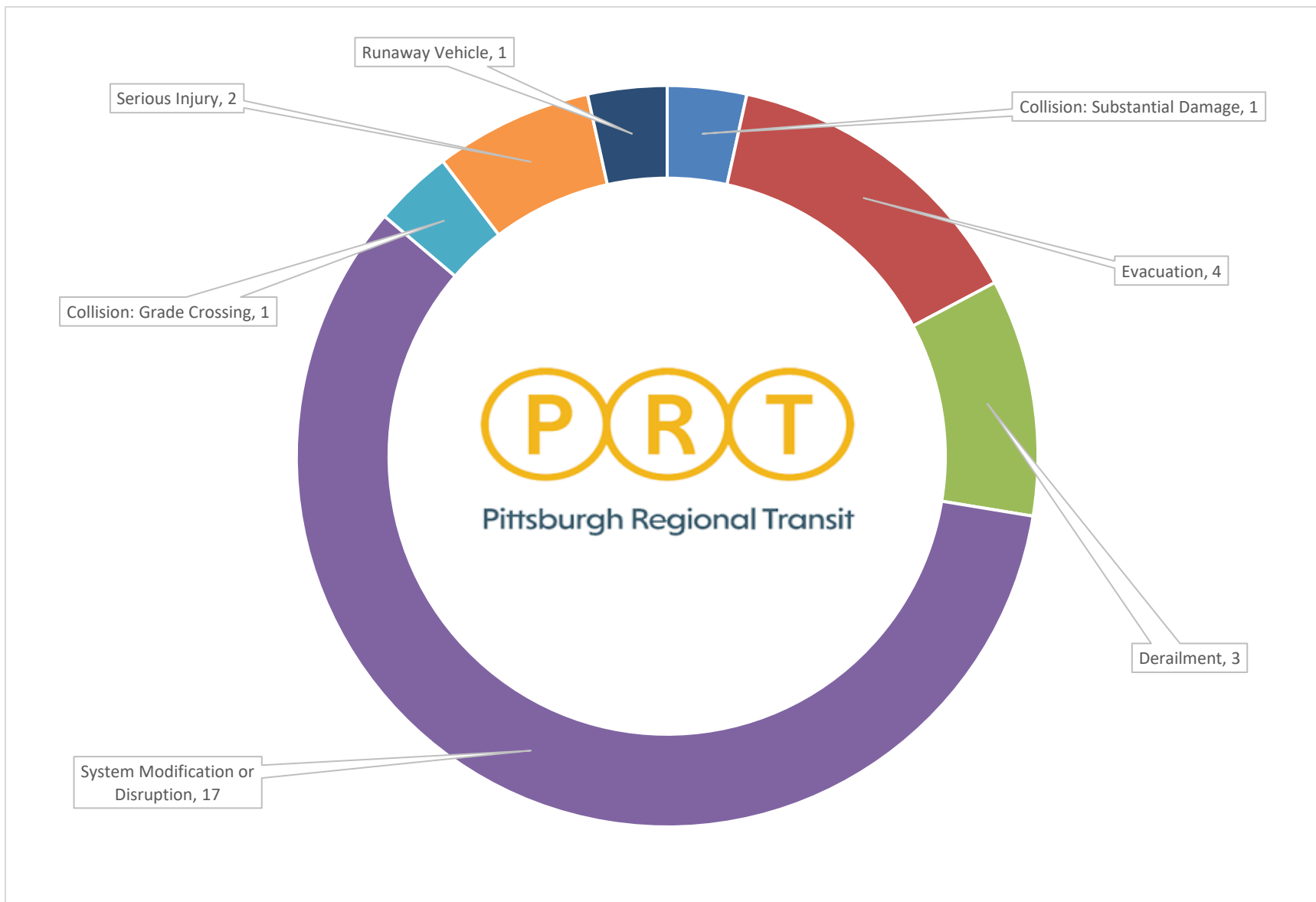


Figure 2: 2022 PRT Reportable Events

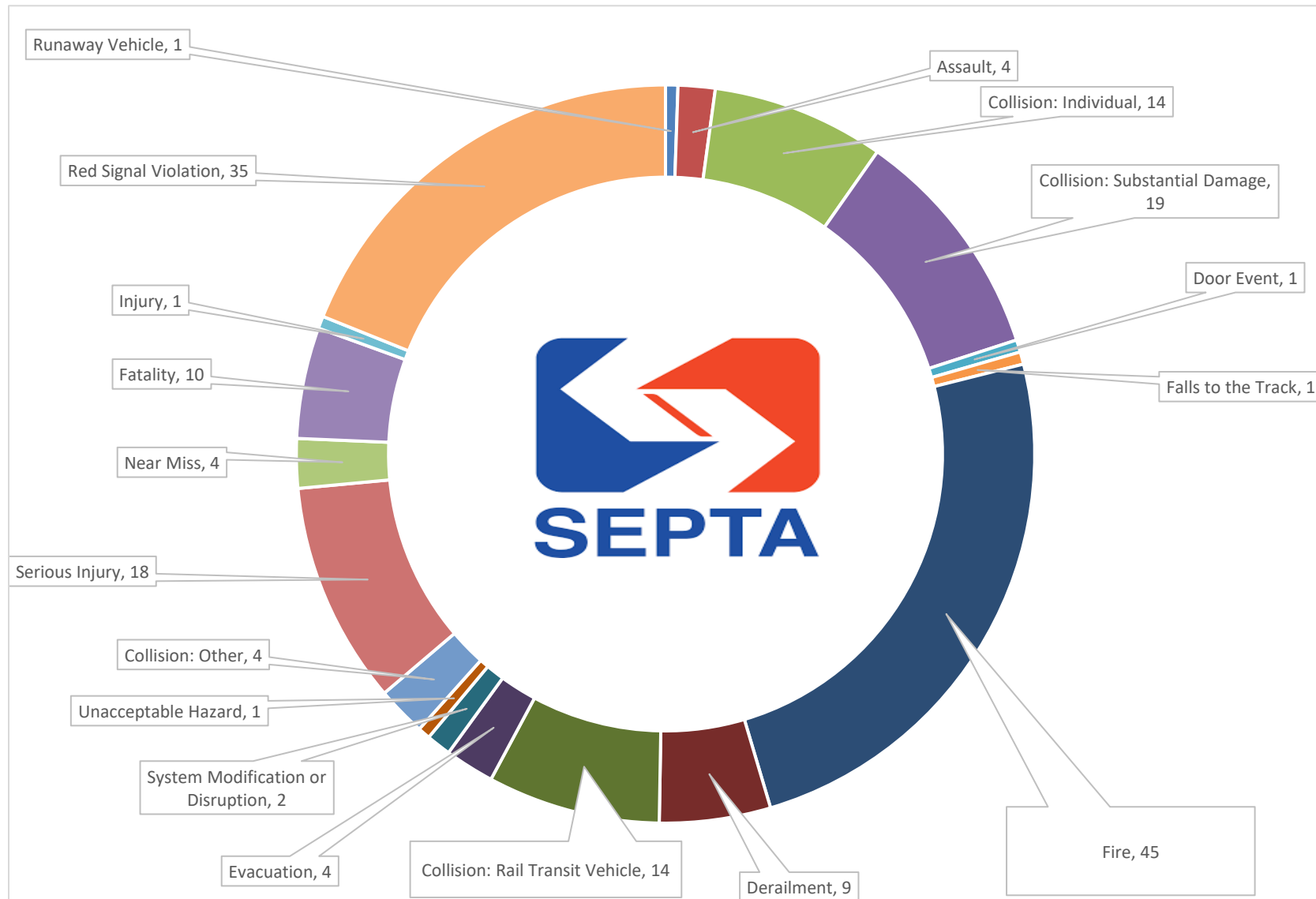


Figure 3: 2022 SEPTA Reportable Events

## 2022 Occurrence Reporting

In 2022, 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 accident/incident reporting, occurrences are reportable to the SSOA in a monthly report. This rigorous reporting standard allows for trend analyses that support the proactive mitigation of more serious safety events.

Table 1 represents the agencies’ reported occurrences to the SSOA in 2022. The majority of occurrences reported in 2022 were related to trespassing. Reported hazards increased by approximately 27% from 2021 to 2022. This was largely due to an increase in trespassing at SEPTA by approximately 37% since 2021. As mentioned previously in this report, in 2022, the SSOA initiated an extensive review of SEPTA’s event data and will continue to work with SEPTA to develop corrective actions and mitigate events at the agency.

Table 1: Occurrences Reported to the SSOA in 2022

|  | CamTran | PRT | SEPTA | Total |
|--|---------|-----|-------|-------|
| <b>Trespassing: Intentional</b>                                    | 0       | 102 | 902   | 1004  |
| <b>Trespassing: Unintentional</b>                                  | 0       | 1   | 169   | 170   |
| <b>Collision: Other</b>  | 0       | 5   | 0     | 5     |
| <b>Elevator/ Escalator Injury</b>                                  | 0       | 0   | 25    | 25    |
| <b>Unacceptable Hazard</b> <i>(as defined by the RTAs’ PTASPs)</i> | 0       | 13  | 2     | 15    |
| <b>Non-Safe Signal or Control System Failures</b>                  | 0       | 0   | 12    | 12    |
| <b>Door Event</b>  | 0       | 0   | 18    | 18    |
| <b>Total</b>   | 0       | 121 | 1128  | 1249  |

# Safety and Security Reviews

## SSOA Risk Based Inspection Program

On October 21, 2022, the FTA issued Special Directive 22-44 to PennDOT, which requires the development and implementation of a risk-based inspection (RBI) program. The FTA issued a similar special directive to every SSOA across the country. The SSOA began updating its risk-based assessment program that was in place to meet the requirements of Special Directive 22-44. The SSOA's RBI program will continue to be updated throughout 2023; applicable changes will need to be made to the state statute, the Program Standard, and the RTAs PTASPs. In 2022, the SSOA performed inspections of SEPTA's rules compliance and pre-trip program and their lock out/tag out program and began developing a priority list for PRT inspections to be completed in 2023.

The RBI program is designed to 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 proactively identifies potential hazards that require further oversight or investigation, uses event trends to highlight risk, and monitors rules compliance and 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 RBA program. In 2022, the SSOA reported on monthly KPIs including rules compliance violations, CAP status, triennial audit results, event analysis, and red signal violations.



Figure 4: KPI Source Data



### Triennial Audits

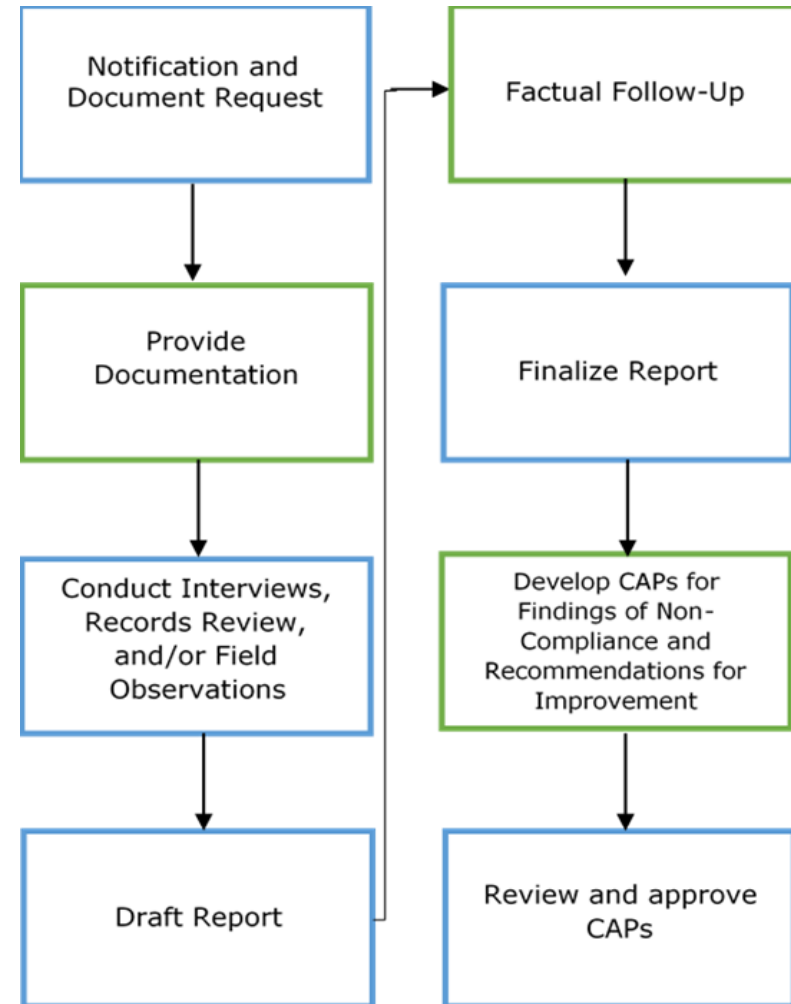
The SSOA performs triennial safety and security audits at each of its covered RTAs on an ongoing basis over a three-year cycle. In 2022, the SSOA started its 2022-2024 triennial audit cycle. Triennial audits include a comprehensive document and record review, interviews, and field observations when warranted. 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 to shift towards SMS-based auditing in 2022 and released updated triennial audit checklists for each audit using the PTASP review checklist as a foundation. Additionally, the SSOA is performing an 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.

Audits by the SSOA may review PTASP or Security and Emergency Preparedness Plan (SEPP) implementation broadly, or they may focus on a narrow range of issues of a more technical matter. In 2022, the SSOA completed three safety triennial audits at CamTran, six triennial audits at PRT, and seven triennial audits at SEPTA.

The SSOA also attends or monitors internal safety and security audits at each covered agency and tracks CAPs that arise from these internal reviews. In 2022, the SSOA oversaw or reviewed one internal audit at CamTran, 18 at PRT, and

12 at SEPTA. The remainder of CamTran’s internal audits have been put on hold until the system reopens.



**Figure 5: Triennial Audit Process**

Table 2 shows the 2022 audit activity by agency and Table 3 shows the total number of Findings of Non-Compliance from SSOA triennial audits.

| Table 2: SSOA Triennial Audits and Agency Internal Audits Performed in 2022 |         |     |       |
|---|---------|-----|-------|
|   | CamTran | PRT | SEPTA |
| <b>SSOA Safety Audits</b>   | 3       | 5   | 6     |
| <b>SSOA Security Audits</b>   | 0       | 1   | 1     |
| <b>Agency Internal Audits</b>   | 1       | 18  | 12    |

| Table 3: Findings of Non-Compliance from SSOA Triennial Audits and Agency Internal Audits Performed in 2022 |         |     |       |
|---|---------|-----|-------|
|   | CamTran | PRT | SEPTA |
| <b>SSOA Safety Audits Findings</b>  | 0       | 2   | 23*   |
| <b>SSOA Security Audits Findings</b>  | -       | 0   | 0     |
| <b>Agency Internal Audits Findings</b>  | 0       | 0   | 0     |

\*Not all Findings from SSOA triennial audits conducted in 2022 were issued as of the finalization of this report and therefore not included in this total count.

## Triennial Audit Checklist Updates

In 2022, the SSOA began updating its triennial audit checklists to better align with the RTAs’ PTASPs. The SSOA is reviewing each section of the agencies’ PTASPs to ensure that every aspect is included in agency-specific checklists. Additionally, further information regarding SMS implementation is being incorporated into the checklists. The checklists will be finalized in 2023 and updated annually when agencies update their PTASPs.

## SSOA Operations and Stations Reviews

The SSOA operations and stations safety inspection continues to be a large part of the SSOA ongoing activities to observe compliance with applicable safety rules and identify hazards. The SSOA conducted operations and stations reviews at covered modes at SEPTA and PRT throughout 2022.

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. All observations made by the SSOA during operations and stations reviews were sent 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 2022, the SSOA obtained a light detection and ranging (LIDAR) speed detection device and began training team members to use it for speed reviews on covered modes at SEPTA and PRT. In 2022, the SSOA conducted 15 LIDAR reviews at SEPTA and 21 LIDAR reviews at PRT. The SSOA will continue to utilize the LIDAR device and analyze the results for trends.

Table 4 shows the total operations and stations reviews completed for PRT and SEPTA in 2022.

| Table 4: Operations, Stations, and LIDAR Reviews Performed in 2022 |     |       |
|--|-----|-------|
|  | PRT | SEPTA |
| <b>Operations Reviews</b>  | 24  | 117   |
| <b>Stations Reviews</b>  | 30  | 89    |
| <b>LIDAR Reviews</b>   | 21  | 15    |

### 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.

At a minimum, 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 quarterly 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 completion. Verification may consist of field

reviews, record reviews, photographs, and/or plan, policy, or procedure revision.

Tables 5, 6, and 7 display the number of opened and closed CAPs per year for CamTran, PRT, and SEPTA, respectively.

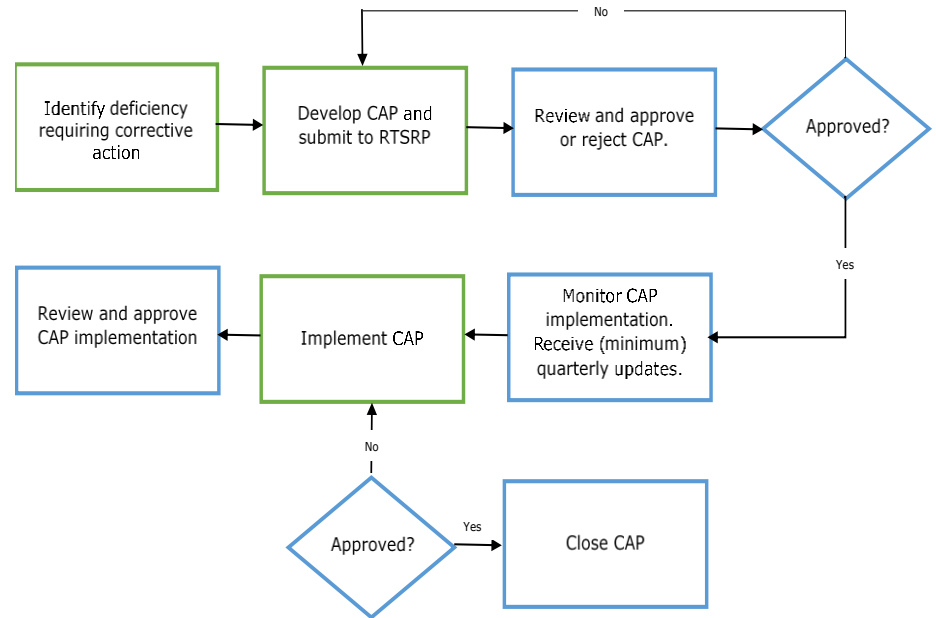


Figure 6: CAP Process

**Table 5: CamTran CAPs by Year as of December 31, 2022**

|                       | 2018 & Before | 2019 | 2020 | 2021 | 2022 | Total |
|-----------------------|---------------|------|------|------|------|-------|
| <b>Open</b>           | 1             | 0    | 1    | 0    | 0    | 2     |
| <b>Closed in 2022</b> | 0             | 0    | 0    | 4    | 1    | 5     |

**Table 6: PRT CAPs by Year as of December 31, 2022**

|                       | 2018 & Before | 2019 | 2020 | 2021 | 2022 | Total |
|-----------------------|---------------|------|------|------|------|-------|
| <b>Open</b>           | 2             | 1    | 0    | 4    | 7    | 14    |
| <b>Closed in 2022</b> | 1             | 0    | 0    | 1    | 1    | 3     |

**Table 7: SEPTA CAPs by Year as of December 31, 2022**

|                       | 2018 & Before | 2019 | 2020 | 2021 | 2022 | Total |
|-----------------------|---------------|------|------|------|------|-------|
| <b>Open</b>           | 10            | 7    | 0    | 17   | 23   | 57    |
| <b>Closed in 2022</b> | 7             | 9    | 2    | 8    | 2    | 28    |



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, 2022, are depicted in Table 8, and the sources of open CAPs are shown in Table 9.



**Table 8: Hazard Ratings of Open CAPs as of December 31, 2022**

|                  | CamTran | PRT | SEPTA | Total |
|------------------|---------|-----|-------|-------|
| <b>High</b>      | 0       | 0   | 0     | 0     |
| <b>Serious</b>   | 1       | 1   | 11    | 13    |
| <b>Medium</b>    | 1       | 11  | 42    | 54    |
| <b>Low</b>       | 0       | 2   | 4     | 6     |
| <b>No Rating</b> | 0       | 0   | 0     | 0     |

**Table 9: Sources of Open CAPs as of December 31, 2022**

|                          | CamTran | PRT | SEPTA | Total |
|--------------------------|---------|-----|-------|-------|
| <b>Internal Audit</b>    | 0       | 0   | 10    | 10    |
| <b>SSOA Audit</b>        | 1       | 5   | 35    | 41    |
| <b>Hazard</b>            | 1       | 6   | 7     | 14    |
| <b>Accident/Incident</b> | 0       | 3   | 4     | 7     |
| <b>Other</b>             | 0       | 0   | 1     | 1     |
| <b>Total</b>             | 2       | 14  | 57    | 73    |

## Security and Emergency Preparedness Efforts

Although the FTA relinquished its security oversight with the release of Part 674, 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 will continue to perform triennial audits of agency SEPPs and observe and participate in any internal security audits, threat and vulnerability assessments, drills and exercises, and any other security-related items. Furthermore, emergency preparedness remains an SSO responsibility as part of each agency’s safety management plan. SSOA security and emergency preparedness efforts include auditing the SEPP; observing or participating in emergency drills and exercises; reviewing RTA threat and vulnerability assessments; and monitoring and overseeing any security and emergency preparedness concerns at covered RTAs.

### System Security and Emergency Preparedness Plan/Security and Emergency Preparedness Plan

The SSOA received the 2022 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 it for use. The SSOA compared the RTAs' SSEPP/SEPPs with the SSOA Program Standard dated July 1, 2022. After SSOA internal review, the SSOA found that each plan met current requirements and was approved for use.

The SSOA completed the triennial audit of four elements of PRT's SEPP: Management Activities, Planning, Organization, Equipment, Training and Procedures, Emergency Exercises and Evaluation, Implementation, Schedule and Evaluation, and CAP Process. The audit was completed March 21 to March 22, 2022. No findings were identified as part of the audit. The SSOA also conducted an audit of SEPTA's Emergency Preparedness and Response Program. The audit assessed SEPTA's compliance with its PTASP, SSEPP, and Emergency Management Operations Plan; the SSOA Program Standard; regulatory requirements and standards; and industry best practices. The SSOA reported two Findings of Non-Compliance and two Observations.

## Looking Forward

---

In 2023, the SSOA will continue to work closely with its covered RTAs regarding safety and security initiatives. Focus areas will include SMS implementation, event investigation, safety certification and reviewing and monitoring agency capital programs, and working with the agencies to improve their PTASPs and hazard management programs. The SSOA will also continue to work toward implementing its strategic plan, which has been developed to enable the SSOA to improve overall rail transit safety and security throughout Pennsylvania. Finally, the SSOA will work toward the development and implementation of a risk-based inspection program compliant with the requirements in the safety directive put forth by the FTA.





All photographs in this document are credited to Transportation Resource Associates, Inc.

**PENNSYLVANIA STATE SAFETY OVERSIGHT AGENCY**

**PENNDOT – BUREAU OF RAIL, FREIGHT, PORTS, & WATERWAYS**

ELIZABETH BONINI, *DIVISION CHIEF*  
STATE SAFETY OVERSIGHT

400 NORTH STREET, 7TH FLOOR |  
HARRISBURG, PA 17120  
PHONE: 717.783.7976 | FAX: 717.705.1255  
E-MAIL: [EBONINI@PA.GOV](mailto:EBONINI@PA.GOV) OR

[WWW.PENNDOT.GOV](http://WWW.PENNDOT.GOV)



**STATE SAFETY OVERSIGHT AGENCY**  
**2022 ANNUAL REPORT**