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DEPARTMENT OF PUBLIC UTILITIES

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VIA ELECTRONIC MAIL

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Washington, DC 20590

RE: Annual Report to FTA of the Department of Public Utilities' 2024 Safety Oversight of the MBTA's Rail Transit System

Dear Mr. Powell:

Pursuant to 49 C.F.R. §§ 674.13(a)(7), 674.39, and 220 CMR 151.10, the Department of Public Utilities ("Department" or "DPU") submits the following report summarizing its major activities overseeing the safety of the Massachusetts Bay Transportation Authority's ("MBTA") rail fixed guideway public transportation system ("subway system") conducted during calendar year 2024. DPU is designated as the State Safety Oversight Agency ("SSOA") for the Commonwealth of Massachusetts pursuant to 220 CMR 151. The MBTA is the only transit system in the Commonwealth operating a subway system.<sup>1</sup> DPU, through its Rail Transit Safety Division ("Division"), conducted a high level of safety oversight activity during 2024 for the

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<sup>1</sup> The MBTA subway system consists of the Orange, Blue, Green, Red, and Mattapan Trolley lines.

MBTA subway system and MBTA's implementation of its safety plan, and successfully accomplished many initiatives and goals.

**A. 2024 Rail Transit Safety Division Accomplishments - Highlights**

- Completed the 2021-2023 Triennial Audit of MBTA and issued the Triennial Audit Report containing findings and recommendations;
- Closed the Federal Transit Administration's ("FTA") Special Directive 22-8 in its entirety;
- Conducted more than 1,200 field activities involving track walks, power system checks, speed audits, door procedure checks, and station and carhouse safety audits, which is over a 100% increase from 2023;
- Developed and implemented new SMART – Safety Management Application for Rail Transit – database, which provides a modern, scalable platform for data on Division corrective actions, investigations, and oversight work that connects with Microsoft PowerBI to enable data-driven decision-making;
- Created and received FTA's approval of a federally-required Risk-Based Inspection program;
- Conducted safety oversight on over 20 MBTA track improvement diversions (MBTA removed all speed restrictions from rail transit (subway) lines by December 22, 2024);
- Completed review and ensured sufficiency of 138 MBTA final investigation reports that MBTA prepared and submitted in 2024; and
- Attained a full-time employee count of 20, which is the target set in DPU's 2023 workload assessment in response to FTA's Special Directive 22-13.

**B. Training and Certification of Rail Transit Staff**

The Division is led by a Director of Rail Transit Safety, an Assistant Director of Compliance and Engineering, and an Assistant Director of Safety Assurance. Division staff consists of compliance officers, engineers specializing in various aspects of rail infrastructure (track, electrical power, signals, and vehicles), along with data analysts and legal staff. Staffing increased from 18 to 20 full-time Division employees, and reduced the level of consultant support.

To improve team effectiveness, the Division prioritizes training and certification of Division staff to ensure they have the knowledge and credentials required to uphold the highest standards of rail transit safety and oversight. The Division's training approach exceeds FTA's requirements and provides continuing opportunities for staff development. The Division works

with each employee upon their hire to ensure competency in the rail industry and the MBTA system.

The Public Transportation Safety Certification Training Program (“PTSCTP”), required by 49 C.F.R. § 672, establishes minimum requirements for the technical proficiency of an SSO program and for the certification and training of SSOA personnel and contractors (“designated personnel”). Designated personnel must complete training requirements within three years of hire, and refresher training every two years.

DPU’s Technical Training Plan requires that its designated personnel satisfy 22 mandated competency areas. All personnel are required to complete *Rail Nomenclature* on the Transportation Safety Institute website within one month of their start date. Designated personnel must also complete seven specific FTA courses to obtain the required PTSCTP certification. Most of the Division completes the required PTSCTP training well in advance of the 3-year requirement for initial certification and is projected to continue this pattern in the years ahead. In 2024, all Division staff either completed all required PTSCTP training or were still within the initial 3-year window for certification.

### **C. Accident Investigations**

Federal regulations at 49 C.F.R. § 674.35 permit an SSOA to assign the investigation of safety events to the rail transit agency. Under 220 CMR 151.09, MBTA is delegated investigation responsibility on DPU’s behalf. DPU may conduct an independent investigation or oversee/monitor an investigation conducted by MBTA. DPU is ultimately responsible for the sufficiency and thoroughness of investigations whether conducted by MBTA or DPU.

If DPU staff observes that MBTA is not conducting a sufficient investigation or the investigation requires additional activities, DPU may conduct its own investigation pursuant to 220 CMR 151.09. Also, DPU may issue its own final investigation report if it disagrees with MBTA’s conclusion. In 2024, DPU issued one independent final report due to DPU’s conclusion that the facts demonstrated a Near Miss event occurred during the incident.

Additionally, DPU implemented a comprehensive review process for all of MBTA’s investigation reports. This process includes rejecting reports and requiring further investigative activities when necessary to achieve a sufficient and thorough investigation. In 2024, DPU received 142 final investigation reports from MBTA, approved 138 investigation reports, and rejected 34 final reports. DPU’s oversight ensures that all findings and conclusions adequately address the relevant safety issues. The attached Exhibit A provides a list of the 2024 closed investigations and the probable cause of accidents.

### **FTA Reportable Events and State Reportable Events**

FTA adopted amendments to the SSOA program regulations (49 C.F.R. § 674) during 2024, which became effective on January 1, 2025. The information in this section of the Annual Report refers to FTA's regulations that were in effect until the end of 2024. FTA defined two types of safety events – accidents and incidents – that generally MBTA must report to FTA and DPU within two hours. These are commonly referred to as “FTA Reportable.”

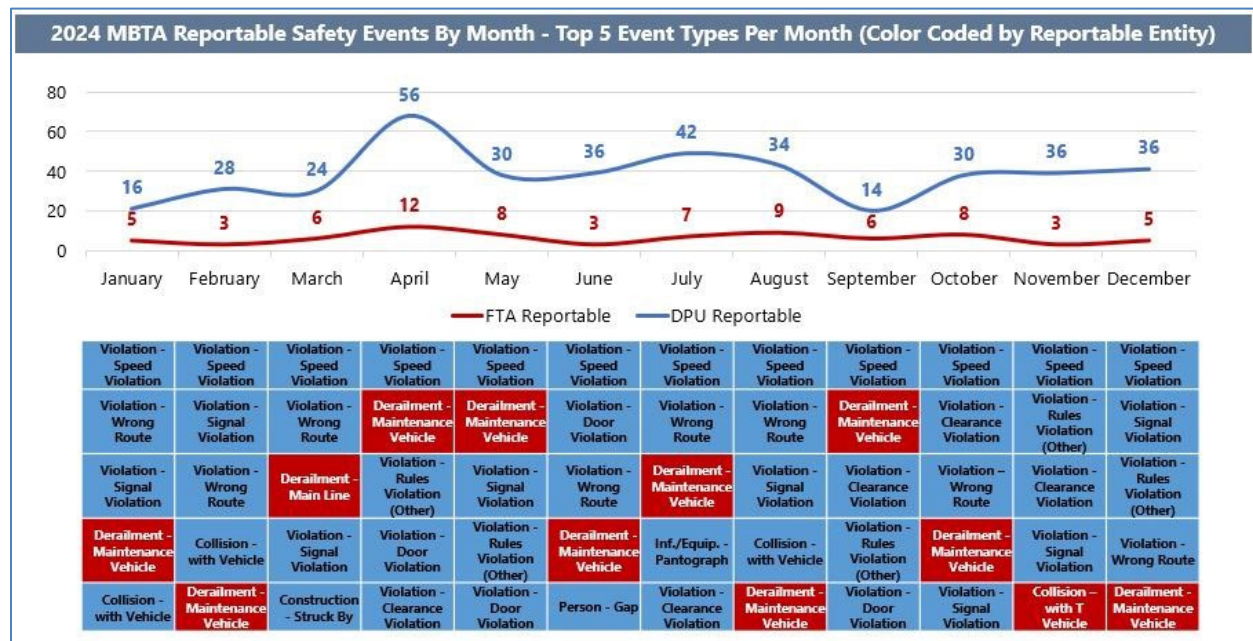
An “accident” was an event that involved any of the following:

- Loss of life;
- Report of a serious injury to a person;
- Collision involving a rail transit vehicle;
- Runaway train;
- Evacuation for life safety reasons; or
- Any derailment of a rail transit vehicle, at any location, at any time, whatever the cause.

An “incident” involved any of the following:

- a personal injury that is not a serious injury;
- one or more injuries requiring medical transport; or
- damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a rail transit agency.

DPU has separately defined a group of incidents or occurrences that MBTA reports to DPU. These are commonly referred to as “State Reportable.”



## Investigation Oversight

DPU staff oversight of MBTA's investigation process includes issuing detailed information requests, reviewing video footage, attending after-action meetings, and conducting interviews. These proactive measures gather critical information about an incident and closely monitor MBTA's investigation.

MBTA conducts a range of investigative activities, including fact-finding and after action meetings, employee interviews, video and audio reviews, and vehicle or equipment testing. On a case-by-case basis, DPU staff monitor and participate in MBTA's investigation at any segment from initiation through completion to ensure a comprehensive and accurate investigation of an incident's causes and circumstances.

DPU's engineering and investigation staff serve a critical role in rail safety oversight by rotating "on-call" duty to respond promptly to safety events. Upon arrival at the scene of an incident, they immediately begin gathering information to develop an independent, preliminary understanding of the incident's circumstances and causes, and monitor MBTA's investigation activities. While on-site, DPU staff document key details through notes and photographs and engage with MBTA personnel. This rigorous oversight helps ensure that the root and contributory causes of each incident are accurately identified in MBTA's investigation reports and in DPU's review.

During 2024, DPU conducted oversight of 142 investigations,<sup>2</sup> comprising 75 FTA Reportable events and 67 State Reportable events. These 142 investigations do not include investigations that DPU began monitoring in 2023 or earlier. Of those 142 investigations, DPU completed review of and approved 138.

### **Participation in NTSB Investigations**

The National Transportation Safety Board (“NTSB”) may assume jurisdiction over investigations of accidents at any rail property across the country.

At the onset of an NTSB investigation, DPU becomes a party to the investigation. DPU staff supports NTSB by providing observations and notes, attending interviews, and providing knowledge about the operation of the MBTA rail system. NTSB issues a factual report at the conclusion of the investigation.

There was one NTSB investigation of MBTA’s subway system in 2024. On October 1, 2024, an eastbound Green Line revenue train derailed its leading railcar at MBTA’s Red Bridge interlocking in Somerville. NTSB commenced an investigation. The Division observed and provided NTSB the following facts:

- There were 50 passengers and two crewmembers on board.
- The train departed Lechmere Station eastbound.
- The train entered a 10-mph zone at 36 mph, passed through a double red signal (which requires a stop) west of the Red Bridge interlocking, and reached a switch that was still moving to direct the train into the diverging track as required by its route.
- Seven passengers were transported to a hospital for minor injuries.

DPU assigned 13 staff members to this investigation in various roles and capacities. NTSB released preliminary findings (NTSB docket number [RRD24FR017](#)) on its website. NTSB’s final report may be released over a year from the investigation.

### **D. Agency Safety Plan**

FTA regulations require MBTA to have an Agency Safety Plan containing processes and procedures to effectively manage safety risks, and a plan to implement a Safety Management System. DPU must review and verify MBTA’s Agency Safety Plan for compliance with FTA requirements. MBTA updated its Agency Safety Plan on August 22, 2024, and provided it to DPU for review. On September 23, 2024, DPU issued comments to MBTA and required

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<sup>2</sup> Investigations oversight count as of December 31, 2024.

modifications to the plan. On December 20, 2024, MBTA resubmitted the revised Agency Safety Plan to DPU for review, and DPU approved it on January 14, 2025.

DPU uses a variety of methods to ensure MBTA's compliance with the Agency Safety Plan, such as DPU's build-up of a significant routine inspection program, enhanced Corrective Action Plan compliance program, comprehensive Triennial Audit of MBTA and issuance of the Audit Report in April 2024, and full compliance with SSOA program requirements as evidenced in FTA's 2024 Triennial Audit of DPU.

#### **E. Corrective Action Plans ("CAP")**

##### **MBTA CAPs**

A CAP is a plan that outlines steps and mitigations (or "corrective actions") to manage a hazard or safety issue. A CAP can have one or more corrective actions and includes an implementation schedule for each individual corrective action. DPU tracks MBTA's CAPs to ensure the approach and timelines are acceptable and practicable. DPU may issue a directive to the MBTA to create a CAP if MBTA does not create one itself.

MBTA had 38 open CAPs as of December 31, 2024, monitored by the DPU. DPU meets regularly with MBTA Quality Control and Oversight, and MBTA Safety Division, to discuss MBTA's progress implementing open CAPs and corrective actions. DPU closed 27 of MBTA's CAPs in 2024.

Additionally, in 2022, FTA's Safety Management Inspection ("SMI") of MBTA's transit operations and maintenance programs resulted in FTA issuing CAPs to MBTA, for which FTA maintains lead oversight, including compliance reviews and CAP amendments. DPU monitors MBTA's SMI CAPs including regularly attending FTA's meetings with MBTA on implementation. Since September of 2023 through the end of 2024, DPU attended dozens of FTA meetings and reviewed hundreds of documents associated with these FTA required CAPs.

##### **DPU CAPs (issued by FTA under its 2022 SMI of DPU)**

In 2022, FTA's SMI also reviewed DPU's effectiveness and role as the SSOA of MBTA's subway system. As a result, FTA issued two Special Directives to DPU (22-8 and 22-13), each containing multiple CAPs. During 2024, DPU made significant progress on completing these FTA SMI CAPs.

##### **Special Directive 22-8**

As a result of the SMI, on June 15, 2022, FTA issued Special Directive ("SD") 22-8 to DPU, requiring DPU to increase and formalize its safety oversight of MBTA's activities and procedures. In 2024, DPU made significant progress on compliance with SD 22-8. FTA closed the following CAPs under SD 22-8:

- **FTA-DPU-23-001:** DPU oversight and enforcement of MBTA's implementation of its System Safety Program Plan hazard analysis and procedures. CAP Closed May 6, 2024.
- **FTA-DPU-23-002:** DPU oversight and enforcement of MBTA's implementation of its System Safety Program Plan hazard identification and tracking procedures. CAP Closed April 19, 2024.
- **FTA-DPU-23-003:** DPU oversight and enforcement of MBTA's implementation of its System Safety Program Plan rules compliance procedures for right-of-way safety rules and procedures. CAP Closed May 6, 2024.
- **FTA-DPU-23-004:** DPU oversight and enforcement of MBTA's rules compliance practices for track maintenance safety rules and procedures. CAP Closed April 19, 2024.
- **FTA-DPU-23-005:** DPU verification of the sufficiency and thoroughness of MBTA's investigation reports. CAP Closed May 6, 2024.
- **FTA-DPU-23-006:** DPU independent review of MBTA's findings of causation. CAP Closed May 6, 2024.
- **FTA-DPU-23-007:** DPU ensuring that MBTA developed CAPs as required from hazards or investigation reports. CAP Closed May 15, 2024.

As a result, FTA fully closed SD 22-8 on September 25, 2024. The closure of SD 22-8 demonstrates DPU's increased ability in overseeing numerous aspects of MBTA's safety activities.

#### Special Directive 22-13

FTA also issued SD 22-13 to DPU on August 31, 2022. In 2023, DPU completed and FTA closed Findings 1.A (workload assessment), 1.B (staffing), and 1.C (staff training). In 2024, DPU made significant progress on the remaining Findings and CAPs under SD 22-13 and requested that FTA completely close SD 22-13:

- SD 22-13, Finding 2

FTA required DPU to complete an updated legal assessment regarding its organizational independence from the MBTA. In March 2023 (and supplemented in early 2024), DPU prepared and submitted the updated legal assessment to FTA. FTA approved and closed Finding 2 on February 7, 2024.

- SD 22-13, Finding 1.D

FTA required DPU to review and update its enforcement authority processes and thresholds to ensure timely resolution of MBTA CAPs and other required actions. DPU completed the relevant actions and submitted a closure request to FTA on November 1, 2024, which is pending FTA review.

- SD 22-13, Finding 3



FTA required DPU to validate MBTA's fatigue management approach for rail transit officials and maintenance and engineering personnel. This corrective action required DPU to assess and determine if additional MBTA process is needed to reduce service hours, and, if so, require MBTA to implement appropriate mitigation.

In response, DPU conducted a fatigue management assessment in 2023. The assessment determined additional MBTA data collection and analysis was required. DPU approved an MBTA CAP (#9301) to address its findings. Throughout 2024, DPU monitored MBTA's CAP implementation and analyzed the new data MBTA made available from the corrective actions. In December 2024, DPU determined that MBTA's progress on short-term corrective actions under CAP #9301 should be transitioned to a longer-term approach to sustain the effort. On December 23, 2024, DPU issued a directive to MBTA to prepare a revised CAP for a long-term approach to fatigue management. On December 13, 2024, DPU requested FTA to close Finding 3. FTA's review is pending.

- SD 22-13 Finding 4

Finding 4 states, "DPU has not demonstrated an ability to address safety issues and concerns identified during FTA's SMI."

DPU continued to demonstrate the ability to address MBTA safety issues in 2024 through DPU's comprehensive safety program development and implementation. These actions include DPU's build-up of a significant routine inspection program, enhanced CAP compliance and enforcement program, comprehensive Triennial Audit of MBTA for the years 2021-2023 (and Audit Report issued April 2024), and full compliance with SSOA program requirements as evidenced in FTA's 2024 Triennial Audit of DPU. On December 13, 2024, DPU requested FTA to close this Finding, and to close SD 22-13 in full. FTA's review of this closure request is pending.

## **F. Enforcement and Compliance Procedure and Actions**

DPU may issue directives for CAPs or other compliance and enforcement actions directing MBTA action to ensure safety. MBTA and DPU staff typically work through the safety concern at issue and identify potential resolutions through creation of a CAP or other action. DPU addressed deficiencies promptly to mitigate risks and maintain a high level of safety across the rail transit network.

In 2024, DPU prioritized safety oversight of MBTA's substantial track improvement program, to ensure that safety standards were met and sustained. DPU closely monitored MBTA's initiatives on enhancing track infrastructure, which included critical upgrades, maintenance projects, and inspections. DPU staff conducted rigorous reviews of these efforts, to ensure MBTA and its contractors comply with safety standards and best practices. Many of

DPU's actions were directly related to maintenance vehicle derailments during diversions. DPU's oversight ensured a uniform approach to safety across both MBTA and its contractors.

#### **April 1, 2024 - Diversion Return to Service Plan**

On March 21, 2024, MBTA provided DPU with the return to service plan for the Orange Line Diversion between North Station and Jackson Square. DPU's review of the plan identified that MBTA needed to clearly define and execute requirements for confirming that the track is safe for resumption of revenue service. DPU directed the following corrective actions, requiring MBTA to create:

- Policies, procedures and thresholds for ensuring that safe conditions are met for key areas of infrastructural improvements including track, power systems and signals, and:
  - Processes for switch certification and for track inspection and accountable parties;
  - Checklist for completion of power procedures;
  - Criteria and inspection documentation of work completed for removal of speed restrictions; and
  - Approvals through the accountable executive and respective departments to document compliance with safety thresholds.

#### **April 11, 2024 - Hi-Rail Derailments Associated with Diversions**

In early April 2024, DPU tracked seven non-revenue hi-rail derailments in 2024, which was equal to the number of derailments in 2023. Several derailments appeared to result from training deficiencies and human error. These were preventable with pre-diversion mitigation activities. On April 11<sup>th</sup>, DPU required a CAP to include the following:

- Provide a clear policy for operators and pilots on switching operations and hi-rail movement of vehicle operations;
- Retrain all contractors and MBTA employees responsible for hi-rail movements on maneuvering of switches and ensuring proper rail alignment;
- Retrain all employees on proper procedures for blocking and securing switches that will be used for hi-rail movements; and
- A pre-diversion infrastructure inspection to identify any hazards that would increase the risk of derailment associated with hi-rail movement.

#### **May 10, 2024 - Contractor operator training**

By early May, there were eleven additional non-revenue derailments and/or split switches since DPU's April 11<sup>th</sup> CAP directive, totaling 19 derailments and/or split switches for the year

to date, often involving contractors and hi-rail equipment. The increase in diversion safety events involving MBTA contractor equipment operators necessitated immediate and targeted attention and improvement. DPU required the following actions by May 24, 2024:

- Proposed corrective actions to finalize and implement detailed policies, procedures, and certifications for ensuring that contractor equipment operators have the technical knowledge to operate hi-rail equipment on the rail including:
  - Proper loading of equipment and carts and proper operation of hi-rail equipment with an altered center of gravity;
  - Operation of hi-rails through switches and proper reading of rail prior to movement; and
  - MBTA-specific training by rail line on hazards and different types of rail infrastructure that contractors will encounter;
- Fully train all MBTA contractors that will work on the Orange Line diversion right-of-way (scheduled to start May 28, 2024) on proper hi-rail movements including reading rail, proper loading of equipment and carts, and safe operations including speed limits and limitations while on the right-of-way;
- Submit to DPU training materials and records for verification of contractor training for the Orange Line diversion;
- Confirm that all hi-rail equipment has up-to-date maintenance-of-way (“MOW”) certification stickers; and
- Assess movement of trailers in the reverse position in relation to the hi-rail derailments involving cart movements, and incorporate recommendations from the assessment into procedures.

DPU required MBTA to conduct the following additional actions by May 28, 2024:

- Fully train all MBTA contractors that will work on a diversion prior to the diversion start date;
- Submit contractor training records to DPU for verification before each diversion start date; and
- Confirm all hi-rail equipment has up-to-date MOW certification stickers prior to use on the right-of-way.

### **July 5, 2024 - Green Line Pedestrian Crossings**

As part of DPU’s Risk-Based Inspection (“RBI”) process, analysis of safety incident data identified instances of streetcars colliding with people on the MBTA’s Green Line during 2023. DPU researched and completed site visits to a selection of Green Line pedestrian crossings in early 2024 to better understand and investigate conditions and operations. DPU identified that a heightened safety hazard exists due to certain MBTA rules compliance

violations. This hazard did not appear to have any mitigations in place via MBTA's hazard management process. DPU issued a Report to MBTA in July 2024 which included a CAP directive to complete a hazard risk assessment of pedestrian crossings on the Green Line, including the following:

- Develop training material to address non-compliance with Light Rail rule 6.B (LR6.B) concerning speed compliance and safe operations at pedestrian crossings;
- Review training material for all streetcar motor persons, and revise and conduct training to re-emphasize compliance with LR6.B at pedestrian crossings;
- Develop a Safety Rules Compliance Program ("SRCP") audit and schedule for pedestrian crossings; and
- Complete a hazard risk assessment of all Green Line pedestrian crossings that lack mechanical controls or additional safety components, such as traffic signals for the streetcars or pedestrian indicator lights ("Please Walk" signs). The assessment should recommend revisions to MBTA rules, including LR6.B, and safety enhancements to protect pedestrians.

#### **August 16, 2024 - Required documentation for Track Improvement Program**

As a result of DPU's oversight of contractor compliance with MBTA safety standards, DPU required MBTA to submit the following:

- Approved safety submittals;
  - Example: Lift plans, work plans, hi-rail job/ task/ hazard analysis;
- Operator compliance credentials;
- Equipment Compliance certifications;
- Daily documentation during each diversion:
  - Pre trip inspections of hi-rail maintenance vehicles;
  - Spot checks of hi-rail maintenance vehicle inspections;
  - Contractor quality (QA/QC) inspections;
  - MBTA Construction Logistics Supervisor verification of transportation staffing at switches and crossovers in accordance with Surge Management Plan; and
  - MBTA Safety inspections, including but not limited to:
    - MAC Safety Daily Reports,
    - MBTA Safety Daily Inspection Reports, and
    - All safety inspections entered in Knack.

#### **August 30, 2024 - Safety Rules Compliance Program**

DPU conducted numerous unannounced oversight inspections of MBTA's SRCP schedule that MBTA provides weekly to DPU under CAPs 8141-8146. Since July 2024, DPU performed an average of 51 SRCP observations per month. As a result of the verification oversight, DPU required the closed CAP 8141-8146 to be re-opened and revised.

### **September 5, 2024 - Evidence Management**

On August 23, 2024, MBTA had a significant safety event involving a collision between three hi-rail vehicles during a Red Line diversion in the Track Improvement Plan (the “incident”). As part of the investigation into the root and contributory causes of the incident, MBTA impounded the vehicles involved, but failed to secure evidence in a manner that would ensure and support a thorough investigation. DPU issued a CAP directive requiring MBTA to develop or take the following actions:

- Implement a tagging process for evidence identification and impounding;
- Maintain a chain of custody log for any item of evidence within a safety investigation;
- Develop a process for 24/7 accountability through the Operations Control Center for tracking any vehicles impounded;
- Maintain a current evidence log contained within MBTA Safety, and accessible to the DPU, of any item tagged and secured as evidence in a safety event investigation;
- Update training materials and courses documenting the process for evidence management;
- Identify all relevant MBTA positions that require training on evidence management;
- Implement a process to immediately notify DPU via Everbridge of any vehicle under impound and any change in status including release from impound;
- Integrate requirements and responsibilities for safety event investigations pursuant to 49 C.F.R. § 674 into the surge management plan and associated contractor documentation, including signatures from contractors in accordance with the Appendix I of the MBTA Safety Event Investigation Manual; and
- Complete an internal MBTA investigation into the failure to secure the impounded Gradall as part of the incident investigation (E24-119).

### **September 19, 2024 - Hi-Rail Derailments Additional Actions Required**

On August 16, 2024, in response to additional work-zone hi-rail vehicle derailments, MBTA submitted and DPU approved CAP 10461 containing ten corrective actions to further mitigate these safety events. Despite these efforts, derailments and/or split switches continued with an additional ten incidents in September. MBTA had a total of 45 hi-rail and/or maintenance vehicle derailments in 2024. The CAP contains the following actions:

- Within 48 hours, at each truck pad, MBTA Safety staff or contractor employees will oversee the hi-rail procedures, and send DPU a staffing schedule; and
  - Implement the procedure (in the CAP 8841 requirement) to complete, witness and document a circle check prior to hi-rail equipment departing a work zone;
- Within two calendar days:
  - Submit a plan and schedule to ensure that all MOW and contractor equipment is fully inspected prior to entering the right-of-way, including:

- Performing TRAM measurements (the distance between two points using a TRAM gauge) and a full inspection of the equipment operational status;
- Identify and report hi-rail vehicles not in compliance with inspection standards; and
- For each vehicle inspection, add inspector certification and documentation of compliance with the Original Equipment Manufacturer (“OEM”) standard inspection and service for the vehicle;
- Within five calendar days, establish, implement, and submit:
  - A procedure and Quality Assurance inspection process for inspection of switches and frogs prior to traversing hi-rail equipment over the work zone;
  - A lock out procedure for switches that cannot be manipulated or deemed suitable for use by hi-rail equipment; and
  - A procedure to add to the morning construction briefing that identifies any out-of-service switches or switches that are “locked out” by any internal or external forces.

#### **G. Observation and Attendance at MBTA Meetings**

In addition to field observations, document reviews, and inspections, DPU participates in or oversees numerous MBTA committee meetings to assess the effectiveness of internal safety processes and structures. In 2024, these include, but are not limited to:

- MBTA Safety meetings;
- Weekly Meeting with MBTA Executive Leadership;
- Monthly Hazard Tracking Meeting;
- CAP alignment meetings;
- SRCP activities;
- Weekly Safety Performance Review; and
- Subway Accident Reduction Committee.

DPU staff also meet regularly with MBTA Safety Division and other MBTA departments that implement corrective actions to review the status of MBTA CAPs. As detailed in the section on accident investigations, DPU staff attend most, if not all, investigative and after-action meetings following an accident or incident. For certain accident investigations in 2024, DPU hosted a seven-day post incident meeting with MBTA to ensure alignment on investigative strategy.

#### **H. Internal Safety Review Conducted by MBTA**

As part of 220 CMR 151.05(5), DPU observed MBTA’s internal audit activities, including both interviews and field activities on a sample basis and monitored the overall internal audit program. In fall of 2024, MBTA initiated the internal safety review of the following departments/areas:

- Occupational Health and Safety/The Clinic
- Rail Vehicle Maintenance (RVM)
- Green Line Transportation/Training
- Maintenance of Way (MOW)
- Vertical Transportation
- Bridges and Structures

On March 6, 2025, MBTA submitted its final 2024 Annual Internal Safety Audit report to DPU. DPU accepted the audit report on March 12, 2025. The audit report documented six findings of non-compliance and 21 recommendations. MBTA will submit CAPs for the findings of non-compliance, pursuant to 220 CMR 151 and 49 C.F.R. § 674.37, for DPU approval.

## **I. Triennial Audit of the MBTA**

### **2024-2026 Audit Cycle**

DPU opted to conduct the triennial audit on an ongoing basis for the current three-year cycle, 2024-2026 (instead of waiting until the 3<sup>rd</sup> year). In September 2024, DPU notified MBTA of its plan to conduct an audit specific to the MBTA's Power Department. Pursuant to 220 CMR 151.10(2)(a), the audit included both scheduled and unannounced onsite visits, including field observations, inspections, investigations, audits, examinations, and interviews. This audit began in November 2024 and concluded in January 2025. DPU is preparing the audit report and anticipates issuance later in 2025.

### **2021-2023 Audit Cycle**

In April 2024, DPU completed its Triennial Audit of MBTA for the 2021-2023 cycle. The Triennial Audit Report contained 25 findings and 64 recommendations. DPU tracked a total of 14 CAPs<sup>3</sup> arising from this Triennial Audit. All 25 findings are being addressed by MBTA, whether through a new CAP proposal, a prior CAP, or a substantially equivalent MBTA CAP under FTA's SMI. Two of the CAPs were closed in 2024, and MBTA is working through the remaining CAPs under implementation plans approved by DPU.

## **J. Risk-Based Inspections ("RBI")**

On October 21, 2022, FTA issued Special Directive 22-34 to all SSOAs in the United States, requiring an RBI program in accordance with 49 U.S.C. § 5329(k). Throughout 2024, DPU addressed the special directive, with the following notable accomplishments:

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<sup>3</sup> Rail Transit Safety CAP status as of 12/26/2024.

- On September 10, 2025, DPU submitted its revised RBI Program to FTA;
- On October 24, 2024, FTA approved DPU's RBI program;
- DPU conducted an RBI project and issued an RBI report to MBTA related to pedestrian crossings on the Green Line (see above);
- DPU proposed and MBTA adopted specific language in the MBTA Transit Safety Plan for support of the DPU's RBI program; and
- Initial implementation of the RBI program resulted in MBTA submitting the first two monthly rounds of RBI program data.

#### **K. Safety Management Application for Rail Transit**

In September 2024, DPU launched SMART – an acronym for Safety Management Application for Rail Transit database. The SMART database allows DPU to track safety event investigations, CAPs, and other SSOA responsibilities. Data from the SMART database assists DPU with data-driven decisions and promotes safety oversight of MBTA.

During the remainder of 2024, DPU continued to work on improving the SMART database, with an additional goal of allowing staff to access SMART from a mobile device. This will ensure access to SMART data at any location on the MBTA system.

The SMART database joins DPU's growing library of data tools, including dashboards, reports, and geospatial heatmaps all of which work together to allow the Division to leverage data for increased safety oversight.

#### **L. Program Standard**

DPU's Program Standard is comprised of DPU's regulations at 220 CMR 151.00 and the Standard Operating Guideline ("SOG") Manual (revised January 2024). There were no amendments to the regulations in 2024.

DPU's SOG provides guidance and protocols for DPU's oversight activities. The SOG is defined in 220 CMR 151.02 as "[T]he policies and procedures established by the State Safety Oversight Agency to implement the Program Standard". In January 2024, DPU updated four SOG sections. FTA and MBTA were notified of these updates before they were implemented. These updates include: (1) Notifications and Investigations (5.1); (2) Hazard Tracking (5.4), CAPs and Corrective Actions (5.5); and (3) and Safety Risk Monitoring (5.6). DPU continues to review sections of the SOG for potential updates and provide consistency with federal regulations and improve oversight procedures and capabilities.

In conclusion, this Annual Report on the Rail Transit Safety in the Commonwealth of Massachusetts summarizes DPU's commitment to protecting passengers, employees, and communities served by the MBTA's rail transit system. Through comprehensive analysis,



strategic planning, and diligent safety measures, MBTA, under DPU's safety oversight, has made continued progress on mitigating risks and improving overall safety performance.

DPU values its strong collaboration with FTA in strengthening the Commonwealth's SSO Program and looks forward to continuing this vital partnership.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert N. Hanson", is positioned above the printed name.

Robert N. Hanson  
Director, Rail Transit Safety Division

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

### 1. MBTA Investigations Completed in 2024: 138

a. FTA Reportable Events Total: **71**

i. Probable Cause Summary:

Probable Cause	Total
Equipment Failure	24
Imprudent Patron Actions	3
Operating Rules Violation/Human Factors	39
Poor Maintenance	2
Slips and Falls	2
Suicide Deaths	1
<b>Grand Total</b>	<b>71</b>

FTA REPORTABLE EVENTS				
DPU #	MBTA #	Date of Event	Probable Cause	Status
E24-005	FY24-00047	1/5/2024	Equipment Failure	Closed
E24-006	FY24-00048	1/6/2024	Equipment Failure	Closed
E24-007	FY24-00083	1/8/2024	Operating Rules Violation/Human Factors	Closed
E24-012	FY24-00397	1/29/2024	Operating Rules Violation/Human Factors	Closed
E24-022	FY24-00781	2/21/2024	Equipment Failure	Closed
E24-023	FY24-00877	2/28/2024	Equipment Failure	Closed
E24-025	FY24-00897	2/28/2024	Equipment Failure	Closed
E24-027	FY24-00919	3/1/2024	Operating Rules Violation/Human Factors	Closed
E24-030	FY24-01103	3/13/2024	Operating Rules Violation/Human Factors	Closed
E24-031	FY24-01261	3/22/2024	Operating Rules Violation/Human Factors	Closed
E24-032	FY24-01265	3/23/2024	Equipment Failure	Closed
E24-033	FY24-01270	3/24/2024	Operating Rules Violation/Human Factors	Closed
E24-037	FY24-01480	4/7/2024	Operating Rules Violation/Human Factors	Closed
E24-064	FY24-01885	4/10/2024	Operating Rules Violation/Human Factors	Closed
E24-039	FY24-01554	4/10/2024	Operating Rules Violation/Human Factors	Closed
E24-044	FY24-01665	4/17/2024	Equipment Failure	Closed
E24-045	FY24-01667	4/17/2024	Slips and Falls	Closed
E24-046	FY24-01666	4/17/2024	Equipment Failure	Closed
E24-051	FY24-01705	4/20/2024	Operating Rules Violation/Human Factors	Closed
E24-059	FY24-01795	4/25/2024	Operating Rules Violation/Human Factors	Closed
E24-060	FY24-01796	4/25/2024	Equipment Failure	Closed
E24-066	FY24-01923	5/2/2024	Operating Rules Violation/Human Factors	Closed
E24-067	FY24-01930	5/3/2024	Operating Rules Violation/Human Factors	Closed
E24-069	FY24-02000	5/7/2024	Equipment Failure	Closed
E24-070	FY24-02002	5/7/2024	Operating Rules Violation/Human Factors	Closed
E24-071	FY24-02021	5/8/2024	Equipment Failure	Closed
E24-075	FY24-02166	5/16/2024	Operating Rules Violation/Human Factors	Closed

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

DPU #	MBTA #	Date of Event	FTA REPORTABLE EVENTS	
			Probable Cause	Status
E24-078	FY24-02301	5/26/2024	Operating Rules Violation/Human Factors	Closed
E24-079	FY24-02363	5/28/2024	Operating Rules Violation/Human Factors	Closed
E24-084	FY24-02724	6/19/2024	Operating Rules Violation/Human Factors	Closed
E24-085	FY24-02756	6/22/2024	Equipment Failure	Closed
E24-087	FY24-02799	6/24/2024	Equipment Failure	Closed
E24-089	FY24-02878	6/27/2024	Slips and Falls	Closed
E24-092	FY24-03029	7/9/2024	Operating Rules Violation/Human Factors	Closed
E24-095	FY24-03072	7/11/2024	Operating Rules Violation/Human Factors	Closed
E24-099	FY24-03141	7/15/2024	Operating Rules Violation/Human Factors	Closed
E24-097	FY24-03132	7/15/2024	Poor Maintenance	Closed
E24-101	FY24-03162	7/17/2024	Operating Rules Violation/Human Factors	Closed
E24-106	FY24-03291	7/23/2024	Operating Rules Violation/Human Factors	Closed
E24-104	FY24-03309	7/24/2024	Suicides	Closed
E24-110	FY24-03666	8/17/2024	Imprudent Patron Actions	Closed
E24-111	FY24-03706	8/19/2024	Operating Rules Violation/Human Factors	Closed
E24-115	FY24-03774	8/23/2024	Operating Rules Violation/Human Factors	Closed
E24-119	FY24-03807	8/26/2024	Equipment Failure	Closed
E24-120	FY24-03840	8/28/2024	Operating Rules Violation/Human Factors	Closed
E24-122	FY24-03879	8/29/2024	Equipment Failure	Closed
E24-124	FY24-04027	9/10/2024	Equipment Failure	Closed
E24-125	FY24-04048	9/11/2024	Equipment Failure	Closed
E24-127	FY24-04079	9/13/2024	Operating Rules Violation/Human Factors	Closed
E24-126	FY24-04074	9/14/2024	Equipment Failure	Closed
E24-130	FY24-04086	9/15/2024	Operating Rules Violation/Human Factors	Closed
E24-128	FY24-04080	9/15/2024	Equipment Failure	Closed
E24-131	FY24-04140	9/16/2024	Operating Rules Violation/Human Factors	Closed
E24-134	FY24-04152	9/17/2024	Equipment Failure	Closed
E24-133	FY2404146	9/17/2024	Equipment Failure	Closed
E24-132	FY24-04142	9/17/2024	Equipment Failure	Closed
E24-136	FY24-04193	9/21/2024	Operating Rules Violation/Human Factors	Closed
E24-137	FY24-04196	9/22/2024	Equipment Failure	Closed
E24-139	FY24-04258	9/25/2024	Operating Rules Violation/Human Factors	Closed
E24-142	FY24-04422	10/4/2024	Imprudent Patron Actions	Closed
E24-143	FY24-04497	10/10/2024	Operating Rules Violation/Human Factors	Closed
E24-145	FY24-04530	10/14/2024	Operating Rules Violation/Human Factors	Closed
E24-146	FY24-04531	10/15/2024	Operating Rules Violation/Human Factors	Closed
E24-147	FY24-04754	10/27/2024	Equipment Failure	Closed
E24-148	FY24-04815	10/29/2024	Operating Rules Violation/Human Factors	Closed
E24-149	FY24-04833	10/30/2024	Operating Rules Violation/Human Factors	Closed
E24-150	FY24-04919	11/5/2024	Operating Rules Violation/Human Factors	Closed

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

FTA REPORTABLE EVENTS				
DPU #	MBTA #	Date of Event	Probable Cause	Status
<b>E24-152</b>	FY24-05011	11/8/2024	Imprudent Patron Actions	Closed
<b>E24-153</b>	FY24-05095	11/17/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-157</b>	FY24-05446	12/6/2024	Poor Maintenance	Closed
<b>E24-164</b>	FY24-05529	12/12/2024	Operating Rules Violation/Human Factors	Closed

b. State Reportable Events Total: **67**

i. Probable Cause Summary

Probable Cause	Total
Action of Motorist	18
Equipment Failure	20
Other – Actions of Nature/Unknown	3
Operating Rules Violation/Human Factors <sup>1</sup>	25
Slips and Falls	1
<b>Grand Total</b>	<b>67</b>

STATE REPORTABLE EVENTS				
DPU #	MBTA #	Date of Event	Probable Cause	Status
<b>E24-002</b>	FY24-00007	1/1/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-003</b>	FY24-00012	1/3/2024	Action of Motorist	Closed
<b>E24-004</b>	FY24-00045	1/5/2024	Equipment Failure	Closed
<b>E24-008</b>	FY24-00101	1/9/2024	Equipment Failure	Closed
<b>E24-009</b>	FY24-00220	1/15/2024	Equipment Failure	Closed
<b>E24-010</b>	FY24-00315	1/23/2024	Slips and Falls	Closed
<b>E24-011</b>	FY24-00317	1/23/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-013</b>	FY24-00523	2/6/2024	Action of Motorist	Closed
<b>E24-017</b>	FY24-00643	2/14/2024	Action of Motorist	Closed
<b>E24-018</b>	FY24-00669	2/15/2024	Equipment Failure	Closed
<b>E24-021</b>	FY24-00777	2/21/2024	Action of Motorist	Closed

<sup>1</sup> The number of state reportable Rules Violations is much larger than 25. However, only a subset of Rules Violations are determined to need an investigation report for submittal to DPU.

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

STATE REPORTABLE EVENTS				
DPU #	MBTA #	Date of Event	Probable Cause	Status
E24-024	FY24-00896	2/28/2024	Equipment Failure	Closed
E24-026	FY24-00946	3/3/2024	Operating Rules Violation/Human Factors	Closed
E24-029	FY24-01101	3/8/2024	Operating Rules Violation/Human Factors	Closed
E24-034	FY24-01365	3/28/2024	Operating Rules Violation/Human Factors	Closed
E24-035	FY24-01400	4/1/2024	Operating Rules Violation/Human Factors	Closed
E24-036	FY24-01437	4/3/2024	Equipment Failure	Closed
E24-038	FY24-01555	4/10/2024	Equipment Failure	Closed
E24-040	FY24-01588	4/12/2024	Equipment Failure	Closed
E24-041	FY24-05190	4/13/2024	Action of Motorist	Closed
E24-043	FY24-01651	4/16/2024	Operating Rules Violation/Human Factors	Closed
E24-047	FY24-01689	4/19/2024	Operating Rules Violation/Human Factors	Closed
E24-052	FY24-01739	4/22/2024	Operating Rules Violation/Human Factors	Closed
E24-053	FY24-01737	4/22/2024	Operating Rules Violation/Human Factors	Closed
E24-062	FY24-01818	4/25/2024	Operating Rules Violation/Human Factors	Closed
E24-074	FY24-02164	4/25/2024	Operating Rules Violation/Human Factors	Closed
E24-068	FY24-01860	4/29/2024	Equipment Failure	Closed
E24-065	FY24-01910	5/2/2024	Action of Motorist	Closed
E24-072	FY24-02022	5/8/2024	Equipment Failure	Closed
E24-073	FY24-02029	5/8/2024	Operating Rules Violation/Human Factors	Closed
E24-076	FY24-02244	5/21/2024	Operating Rules Violation/Human Factors	Closed
E24-077	FY24-02285	5/24/2024	Operating Rules Violation/Human Factors	Closed
E24-080	FY24-02428	6/2/2024	Other-Acts of Nature/Unknown	Closed

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

STATE REPORTABLE EVENTS				
DPU #	MBTA #	Date of Event	Probable Cause	Status
E24-081	FY24-02452	6/3/2024	Equipment Failure	Closed
E24-082	FY24-02618	6/12/2024	Equipment Failure	Closed
E24-086	FY24-02817	6/24/2024	Action of Motorist	Closed
E24-088	FY24-02863	6/27/2024	Other – Actions of Nature/Unknown	Closed
E24-090	FY24-02933	7/2/2024	Action of Motorist	Closed
E24-091	FY24-03018	7/8/2024	Other-Acts of Nature/Unknown	Closed
E24-094	FY24-03065	7/10/2024	Equipment Failure	Closed
E24-093	FY24-03050	7/10/2024	Equipment Failure	Closed
E24-096	FY24-03082	7/11/2024	Operating Rules Violation/Human Factors	Closed
E24-100	FY24-03147	7/16/2024	Equipment Failure	Closed
E24-103	FY24-03259	7/22/2024	Equipment Failure	Closed
E24-105	FY24-03343	7/26/2024	Action of Motorist	Closed
E24-107	FY24-03366	7/28/2024	Equipment Failure	Closed
E24-108	FY24-03441	8/2/2024	Action of Motorist	Closed
E24-109	FY24-03610	8/13/2024	Operating Rules Violation/Human Factors	Closed
E24-113	FY24-03708	8/19/2024	Equipment Failure	Closed
E24-114	FY24-03768	8/22/2024	Action of Motorist	Closed
E24-116	FY24-03797	8/24/2024	Equipment Failure	Closed
E24-121	FY24-03866	8/28/2024	Action of Motorist	Closed
E24-123	FY24-03905	9/2/2024	Action of Motorist	Closed
E24-135	FY24-04190	9/20/2024	Action of Motorist	Closed
E24-138	FY24-04244	9/23/2024	Operating Rules Violation/Human Factors	Closed

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

DPU #	MBTA #	Date of Event	STATE REPORTABLE EVENTS	
			Probable Cause	Status
<b>E24-140</b>	FY24-04314	9/27/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-144</b>	FY24-04428	10/5/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-151</b>	FY24-04987	11/9/2024	Action of Motorist	Closed
<b>E24-154</b>	FY24-05192	11/15/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-155</b>	FY24-05202	11/21/2024	Other-Acts of Nature/Unknown	Closed
<b>E24-156</b>	FY24-05243	11/24/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-159</b>	FY24-05443	12/6/2024	Action of Motorist	Closed
<b>E24-158</b>	FY24-05464	12/7/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-161</b>	FY24-05500	12/10/2024	Equipment Failure	Closed
<b>E24-163</b>	FY24-05512	12/11/2024	Operating Rules Violation/Human Factors	Closed
<b>E24-162</b>	FY24-05511	12/11/2024	Action of Motorist	Closed
<b>E24-166</b>	FY24-05663	12/19/2024	Action of Motorist	Closed

### 2. Corrective Action Plans Status as of December 31, 2024

*This summary represents a snapshot of the status of all Corrective Action Plans (CAPs) that remained open as of December 31, 2024, or closed during 2024, regardless of the year the CAP originated.*

Open CAPs: **38**

Closed CAPs: **27**

#### a. Summary of Sources

Source	Total
Directive	4
DLS Civil Citation	1
Event/Investigation	35
Hazard	8
MBTA Internal Safety Audit 2022	1
MBTA Internal Safety Audit 2023	2

## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

DPU Triennial Audit 2021-2023	14
<b>Grand Total</b>	<b>65</b>

DPU CAP	MBTA CAP	Source	Status
C20-001	6620	Hazard - internal identification	Closed
C20-003	6320	Hazard	Open
C20-007	6720	Hazard	Closed
C20-009	6700	Hazard	Open
C20-010	6860	Event/Investigation	Open
C21-024	7460	Event/Investigation	Closed
C21-044	7880	Event/Investigation	Open
C22-001	8000	Hazard	Open
C22-007	8141-8146	Directive	Open
C22-019	8401	Event/Investigation	Closed
C22-022	8622-8623, 8641-8648, 8661-8663	Internal Safety Audit 2022	Open
C22-023	8681, 8682	Event/Investigation	Closed
C22-026	8821	Event/Investigation	Closed
C22-028	8841	Event/Investigation	Closed
C23-010	9021	Event/Investigation	Closed
C23-012	9101	Event/Investigation	Closed
C23-013	10042	Triennial Audit	Open
C23-023	9281	Event/Investigation	Open
C23-024	9301	Directive	Open
C23-029	9341	Event/Investigation	Closed
C23-031	9401	Event/Investigation	Closed
C23-033	9421	Event/Investigation	Open
C23-034	9481	Event/Investigation	Closed
C23-035	9501	Event/Investigation	Closed
C24-001	9581	Event/Investigation	Closed
C24-002	9621	Internal Safety Audit 2023	Open
C24-003	9622	Internal Safety Audit 2023	Open
C24-005	9681	Event/Investigation	Open
C24-006	9701	Event/Investigation	Closed
C24-009	9641	Event/Investigation	Open
C24-010	9761	Hazard	Open
C24-011	10021	DLS Civil Citation	Closed
C24-012	10101	Directive	Open
C24-014	10043	Triennial Audit	Open
C24-015	10044	Triennial Audit	Open
C24-016	10061	Triennial Audit	Open
C24-017	10181	Hazard	Open
C24-018	10041	Triennial Audit	Open



## Exhibit A to 2024 Annual Report of Massachusetts DPU's SSOA Activity

DPU CAP	MBTA CAP	Source	Status
C24-019	10081	Triennial Audit	Open
C24-021	10381	Triennial Audit	Open
C24-022	10443	Triennial Audit	Open
C24-023	10445	Triennial Audit	Open
C24-024	10441	Triennial Audit	Open
C24-025	10442	Triennial Audit	Open
C24-026	10461	Hazard	Open
C24-028	9446	Event/Investigation	Open
C24-029	10561	Triennial Audit	Open
C24-030	10601	Triennial Audit	Open
C24-031	10501	Directive	Open
C24-033	10642	Triennial Audit	Open
C24-035	10701	Event/Investigation	Open
C24-036	9449	Event/Investigation	Closed
C24-037	9444	Event/Investigation	Closed
C24-038	9452	Event/Investigation	Closed
C24-039	9451	Event/Investigation	Closed
C24-040	9450	Event/Investigation	Closed
C24-041	9448	Event/Investigation	Closed
C24-042	9447	Event/Investigation	Closed
C24-043	9445	Event/Investigation	Closed
C24-044	9442	Event/Investigation	Closed
C24-045	9443	Event/Investigation	Closed
C24-046	9441	Event/Investigation	Closed
C24-047	10201	Event/Investigation	Open
C24-048	9801	Event/Investigation	Open
C24-049	10541	Event/Investigation	Open