



**Massachusetts Bay
Transportation Authority**

Safety Updates

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MBTA Board of Directors Meeting
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Discussion Topics

- 2024 Transit Safety Plan (TSP) Update
- Recent Incidents and Corrective Actions
- Safety Performance Indicators and Trend Analysis

Transit Safety Plan (TSP) Background

- Transit Safety Plan is a requirement of the Federal Transit Administration.
- Plan's foundation is based upon Safety Management System (SMS) principles: Safety Policy, Safety Risk Management, Safety Assurance and Safety Promotion.
- The comprehensive TSP:
 - Establishes policies, processes, and procedures to support the MBTA's implementation of SMS (49 CFR Part 673)
 - Describes and outlines SMS framework, processes, implementation, and management
- MBTA is required to review its TSP annually, update the plan as needed, and submit the Plan to DPU for certification by September 1.

Transit Safety Plan Key Revisions

- Safety Policy Statement updated
- Definitions updated per FTA requirements
- SMS Implementation updated to reflect the completion of the SMS Gap Analysis and changes to the SMS Implementation Plan
- Safety management roles and responsibilities updated, including descriptions of risk acceptance responsibilities that are aligned with revisions to the SRM process in 2024
- Expanded/clarified responsibilities for the Joint Labor Management Safety Committee, including roles in risk mitigation, continuous improvement, and performance target development
- Updated Safety Hotline reporting methods, and added the new Safety Hotline Portal
- Updated Safety Performance Targets and included new targets for CY 2025

Safety Performance Target Revisions

TSP Section 3.1, MBTA Safety Performance Target Changes

- Updated to describe the risk reduction program structure and process
- Added new safety performance targets for transit worker fatalities, injuries, and assaults, and collisions
- Updated all safety FTA/DPU safety performance targets for 2025

Calendar Year 2025							
Mode of Transit Service	Fatalities (Total)	Fatalities (Rate per 1 million revenue miles)	Injuries (Total)	Injuries (Rate per 1 million revenue miles)	Safety Events (Total)	Safety Events (Rate per 1 million revenue miles)	System Reliability (Revenue miles traveled per major mechanical failure)
Heavy Rail	0	0	180	9.5	28	1.52	49,000
Light Rail	0	0	95	17.02	29	5.26	8,216
Bus	0	0	303	14.28	103	4.85	28,500
The RIDE	0	0	25	3	28	3.28	25,900

Board Action: 2024 Transit Safety Plan

VOTED:

As required by 49 CFR § 673.11 (a)(1), the MBTA Board of Directors hereby approves the Massachusetts Bay Transportation Authority Transit Safety Plan for 2024, as presented to the Board on August 22, 2024.



Recent Incidents and Corrective Actions



Safety Performance Indicators and Trend Analysis Highlights June 2024

Bus

- Notable downward trend in Bus vs. Pedestrian Collisions, 3rd month in a row.
- Notable improvement in Bus NTD Reportable Injuries.
- Continued trend in meeting Bus System Reliability performance targets.

Heavy and Light Rail

- Continued success reported in system reliability for *Heavy Rail Mean Miles Between Mechanical Failures* performance.
- Continued success for Blue Line in meeting all of its Collision Targets (has met all targets since July 2023.)
- All Smoke/Fire Incident targets were met again in June for heavy rail, making this three months in a row.

Questions?

Appendix

Key Revisions Drafted Spring/Summer 2024 for Approval by September 1, 2024

Preface 1, Safety Policy Statement

- Updated and signed in consultation with GM Eng prior to Sept. 1.

Preface 2, MBTA SMS Implementation

- Comprehensively updated to reflect the completion of the SMS Gap Analysis and redevelopment of the SMS Implementation Plan in 2024.

Section 1.3, Federal, State, and Local Authority

- Updated to describe the April 2024 revision of 49 CFR Part 673 and corresponding changes required for the MBTA safety program.

Section 1.4, Plan Review, Revision, and Approval

- Minor changes to this section describing MBTA's process for receiving and reviewing regulatory updates from FTA, as well as the process for coordination with DPU prior to approval of the TSP.

Section 3.1, MBTA Safety Performance Targets

- The April 2023 revision to 49 CFR Part 673 requires MBTA to create a "risk reduction program". That program and how it is structured and carried out is now described in this section.
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- New safety performance targets for transit worker assault and collisions have been added to comply with Part 673 requirements.
- All targets are being updated for 2025.

Section 4.1, Key Safety Management Responsibilities

- Updated description of the Accountable Executive's responsibilities in relation
 - to recommendations made by the Joint Labor Management Safety Committee.
- Updated descriptions of risk acceptance responsibilities that are aligned with updates to the SRM process in 2024.
- Updated description of key roles, including that of the Chief Operating Officer.

Section 4.2, Safety Management Committee Structure

- Significantly expanded to capture new or clarified responsibilities for the Joint Labor Management Safety Committee, including roles in risk mitigation, continuous improvement, and performance target development.

Section 5, Safety Risk Management

- Updated tables for Severity, Likelihood, and Risk based on program changes developed during 2024.
- New tables summarizing the risk acceptance process both within the SRM Workshop process and outside of SRM Workshops.

Section 6, Safety Assurance

- New introductory section with a simplified description of Safety Assurance process steps and how they relate to the Safety Risk Management process.
- Updated Safety Hotline reporting methods, including new Safety Hotline Portal.

Definitions

- Revised to include various new definitions from 49 CFR Part 673 and/or other internal MBTA discussions over the past year, including "Near Miss" and "Assault on a Transit Worker".

Appendices

- MBTA Reference Documents list updated to include new items and to identify certain items as Minimum Standards for Safety in alignment with DPU requirements.

Safety Performance Indicators and Trend Analysis - *Bus*

- For the **third consecutive month**, Bus performed at target or better in *Bus vs. Pedestrian Collisions Rate* (**1.19** in June vs. Target Rate of **1.49**).
- There were **12 Bus NTD Reportable Safety Events** in June, exceeding the monthly performance target of **7.33** but **improving** over May 2024 performance (**16**).
- There was a notable **improvement** in *Bus NTD Reportable Injuries* (this includes both customer and employee transported injuries), decreasing the total number of injuries from **41** in May 2024 to **29** in June, though still exceeding the monthly target of **21**.
- For the **second consecutive month**, Bus performed at target or better in *System Reliability* (**40,654 mean miles between mechanical failures** in June vs. Target Rate of **28,000**).





Safety Performance Indicators and Trend Analysis – *Heavy Rail*

- Second consecutive month with **4 Heavy Rail NTD Reportable Safety Events**, falling short of our target (**1.92**).
- There were **25 NTD Reportable Injuries** (this includes both customer and employee transported injuries) on *Heavy Rail*.
- There were **0 Main Line or Yard derailments** on the Heavy Rail in June. However, there was **1 Maintenance Vehicle** derailment.
- The **Orange Line** had a Customer Injury rate of **5.02 customer injuries per one million passenger trips**, exceeding the monthly performance target of **2.12**.
- Heavy Rail met its Reportable Smoke Fire performance targets for all three lines in June, with **0** incidents on the **Blue Line (0.98)**, **2** on the **Orange Line (3.21)**, and **3** on the **Red Line (5.88)**.
- Continued success in system reliability for Heavy Rail. *Heavy Rail Mean Miles Between Mechanical Failures* performance in June was **54,595** compared to the target of **49,000**.



Safety Performance Indicators and Trend Analysis – *Light Rail*

- There were **3** *Light Rail NTD Reportable Safety Events* in June, compared to the target of **2.25**.
- Increase in *Light Rail NTD Reportable Injuries* (this includes both customer and employee transported injuries) in June, with **11** compared to the monthly performance target of **6.58**.
- There was **1** *Light Rail Maintenance Vehicle derailment* in June, but no *Yard or Main Line derailments*.
- For the **second consecutive month**, Light Rail performed at target or better in *Collisions Rate* (**1.82** in June vs. Target Rate of **2.86**).
- Increase in *Light Rail Reportable Smoke and Fire Incidents* in June, with **5** incidents.

Safety Performance Indicators and Trend Analysis

Commuter Rail / Ferry



- Commuter Rail's June accident frequency ratio stands at **1.9**, indicating better performance compared to the year-to-date ratio of **2.6**.
- Commuter Rail reported **4** Reportable and **0** Non-Reportable employee injuries, with **0** passenger injuries recorded.
- There were **0** Commuter Rail derailments and reportable rule violations.
- Ferry had **0** Reportable and **2** Non-Reportable employee injuries, with **5** passenger injuries reported.