



**Massachusetts Bay
Transportation Authority**

Safety Updates

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MBTA Board of Directors Meeting

December 19, 2024



Discussion Topics

- 2024 Transit Safety Plan (TSP) Update
 - Background, update process, and key revisions
- National Transit Database, Safety Event, and Risk Overviews
- MBTA Bus Intersection Review Project Update
- Recent Incidents and Corrective Actions

2024 Transit Safety Plan (TSP) Update Background

- MBTA submitted the previous Plan approved by the Board of Directors to DPU prior to 9/1/24 annual deadline
- DPU responded with comments for updates to the TSP
- Resubmittal deadline was agreed for 12/20/2024 to allow for time to make updates and present to the Board
- Since the first submittal, other regulatory factors have also impacted the required content for the Plan:
 - 49 CFR Part 674 (State Safety Oversight Regulation) Update
 - DPU Program Standard / Risk-Based Inspection Addendum Update

TSP Regulatory Updates

- 49 CFR Part 674 (SSO Regulation)
 - Updated and clarified terms for safety events
 - Updated notification thresholds incorporating the new terms
- DPU Risk-Based Inspection Program
 - Updated Section 1 and RBI Addendum in Plan appendices
 - Clarifies DPU's authority to perform inspection activities
 - Describes MBTA's role in supporting activities
 - Establishes framework for data sharing in support of RBI program


DPU TSP Comments and MBTA Response

Near miss definition:

- Updated to remove references to “personal injury,” “rules compliance,” and “chance or timely intervention” per DPU comments
- Revised definition reads:
“A narrowly avoided safety event in which no property was damaged and no injury was sustained, but where given a slight shift in time, position, or situational awareness, damage or injury could have easily occurred. A violation of a rule or procedure shall not be classified as a near miss unless the violation introduced a direct, urgent, and immediate risk to health, life, property, or the environment at the time of its occurrence.”

DPU TSP Comments and MBTA Response

Minimum Standards for Safety:

- Updated to reference requirements in DPU Standard Operating Guideline Manual
 - Describes coordination required when edits are made to key MBTA documents including the Safety Event Investigation Manual and Safety & Security Certification Program
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Proposed Board Vote

VOTED:

As required by 49 CFR § 673.11 (a)(1), the MBTA Board of Directors hereby approves the 2024 Massachusetts Bay Transportation Authority Transit Safety Plan, presented to the Board on December 19, 2024.

National Transit Database (NTD) Reportable Safety Events

Bus: A safety or security event occurring on transit right of way or infrastructure, at a transit revenue facility, at a maintenance facility, during a transit related maintenance activity, or involving a transit revenue vehicle.

- Fatality within 30 days of incident
- One or more injuries requiring transport for medical attention
- Estimated property damage equal to or exceeding \$25,000
- Evacuation for Life Safety Reasons
- Collision involving revenue vehicles that require towing due to disabling damage

Rail: A safety or security event occurring on transit right of way or infrastructure, at a transit revenue facility, at a maintenance facility or rail yard, during a transit related maintenance activity, or involving a transit revenue vehicle

- Fatality within 30 days of incident
- One or more injuries requiring transport for medical attention
- Serious injury that does not involve transport
- Substantial property damage (including towing of any vehicle for disabling damage)
- An evacuation for Life Safety Reasons or onto the rail right of way
- Runaway Train
- Rail transit vehicle collision occurring at a grade crossing
- Rail transit vehicle collision with an individual
- Collision with another rail vehicle
- A mainline or yard derailment of revenue or non-revenue vehicles

Safety Events and Risk

MBTA's risk assessment process is applied to hazards under the Safety Risk Management component of the SMS



Safety Events and Risk

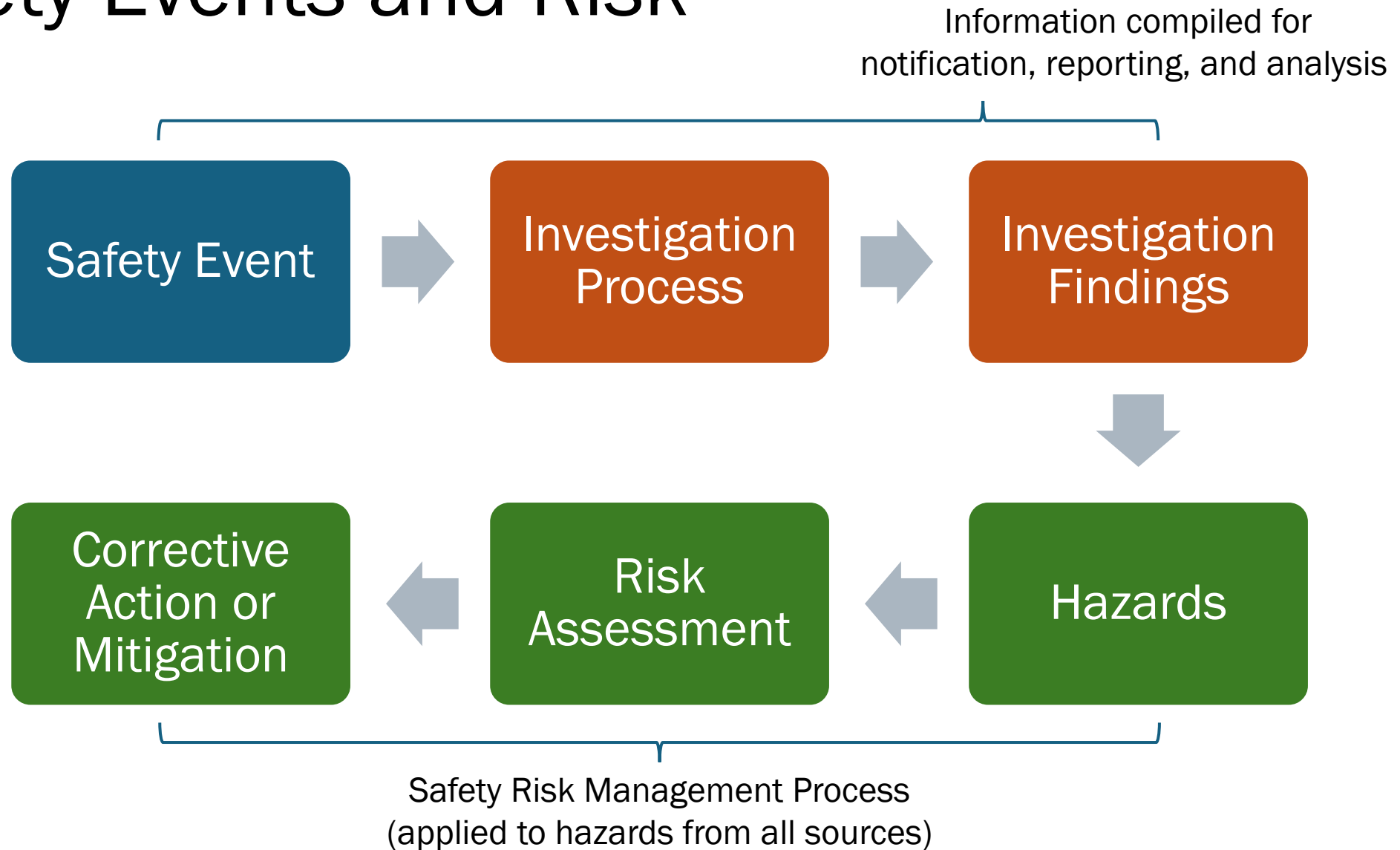
- Safety Data & Analytics track all events, regardless of if they are reportable or not.
 - Supports notification and reporting to NTD, DPU, FTA
 - This helps build out our future performance assessments and development of KPIs
- DPU and FTA have identified specific event types that must be investigated, defined in regulations and mirrored in the Transit Safety Plan
 - MBTA's investigation process, as defined in the Safety Event Investigation Manual, identifies underlying hazards that lead to safety events

MBTA Safety Events and Risk

- Safety events are **one of many** sources of hazards that undergo risk assessment
- Other sources include Safety Hotline reports, inspections, observations, and audit results
- SRM workshops are MBTA's most formal and structured method for identifying hazards and assessing risk

Event/Condition	Catastrophic (1)	Critical (2)	Moderate (3)	Minor (4)	Low (5)	Mitigation Effectiveness
Frequent (A)	High	High	Serious	Serious	Medium	Not Effective (A)
Probable (B)	High	Serious	Medium	Medium	Medium	Minimal (B)
Occasional (C)	High	Serious	Medium	Medium	Low	Limited (C)
Remote (D)	Serious	Medium	Medium	Low	Low	Adequate (D)
Improbable (E)	Medium	Medium	Low	Low	Low	Effective (E)
Eliminated (F)	Eliminated					

Safety Events and Risk



MBTA Bus Intersection Review Project Update

- MBTA Bus Intersection Review Project is being conducted to identify intersections with potential turning clearance hazards.
- Program Phase 1 includes the following steps:
 - Pull data on top 10 collision routes for October 1, 2023, to October 1, 2024
 - Filter down a list to include collisions reported at intersections that also reported making a turn
 - Observe identified locations from the filtered list using Google Earth/Streetview to see if any intersections have the potential for acute turn issues
 - Compile intersections into a proposed field inspection list
 - Schedule and conduct joint field inspections with Bus Operations at high collision intersections
 - Review for sight lines during turns, potential conflicts with other vehicles or pedestrians, concurrent pedestrian signals, and bus driver, motorist, and pedestrian behavior.
 - Expected completion of Phase 1 – April 2025.
- Phase 2 will expand to all routes and intersections with acute turns

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Data Discovered from Bus Intersection Review Project

Top 10 Intersections	Total Number of Collisions	Weekday Trips per Year	Route(s)
Washington St. @ Blue Hill Ave.	4	60,840	023
Tremont St @ Malcolm X Blvd	3	49,660	028
River St @ Mattapan Busway (Rear Driveway)	3	49,660	028
Sagamore Ave @ Garfield Ave	3	111,800	111
Temple Place @ Tremont St.	3	66,560	SL5 (749)
Soldiers Field Rd @ River St	3	37,700	070
Longwood Ave @ Ave Louis Pasteur	3	26,780	047
Blue Hill Ave @ Warren St	2	49,660	028
New Rutherford Ave @ NB US-1 Ramp	2	111,800	111
Hanover St @ Cross St	2	111,800	111

*Collisions as a result of a turning movement between October 1, 2023, and October 1, 2024

Recent Incidents and Corrective Actions



Questions?
