



## The Massachusetts Bay Transportation Authority

Corrective Action Plan (CAP)

**FTA 23-10-MBTA-  
CAT2-6**

### BACKGROUND

**Overview:** FTA issues Special Directive 22-10 to require the Massachusetts Bay Transportation Authority (MBTA) to address findings documented in FTA's Safety Management Inspection (SMI) report released on August 31, 2022. Conducted between April 14 and June 30, 2022, FTA's SMI reviewed the MBTA rail transit system management, operations, and maintenance programs. This Special Directive identifies six findings requiring action that the MBTA must take to enhance and expedite implementation of the agency's SMS, including the development of procedures, safety management training, safety risk assessment, and safety assurance activities to build the organization's capability to identify safety concerns and to prioritize action to mitigate safety risk.

### PURPOSE

This Corrective Action Plan has been developed to address **Category 2 – Prioritization of safety management information**

#### FTA Finding

##### Prioritization of safety management information

- Finding 6: MBTA safety information management tools (hazard log, safety risk mitigation log, etc.) do not fully support prioritization of resources to address safety risk and safety performance monitoring.

#### FTA Required Action

- 6.A: MBTA must evaluate (and correct) the data contained in its hazard log and safety risk mitigation log for accuracy and relevancy to SMS.
- 6.B: MBTA must expedite the build out of its safety risk and safety risk mitigation monitoring information tools.
- 6.C: MBTA must demonstrate use of its safety information management tools to effectively prioritize its resources to address the results of:
  - Safety Risk Monitoring
  - Safety Performance Monitoring

### ANALYSIS AND RECOMMENDATIONS

#### Analysis

- MBTA has identified existing documentation and process flows for safety risk tracking and safety performance monitoring.
- MBTA has established provisions for obtaining safety data from operations and maintenance departments, which is manually entered and tracked in several workbooks, in some cases resulting in additional resource demands, occasional duplicative effort, and increased challenges tracking and analyzing data.
- MBTA is in the process of implementing a new SMS database to support safety risk mitigation monitoring and safety assurance activities, but these features are not currently available. MBTA's legacy database is not configured to support safety risk mitigation monitoring and safety assurance activities.

#### Recommendations

- MBTA will reassess SMS requirements for accident investigation activity and document tracking, correction action plans and mitigations, and analysis and trending to incorporate these requirements into its Origami SMS Safety Assurance and Safety Risk Management modules.



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## ACTION PLAN

**Description:** MBTA has onboarded a consulting firm to assist with a comprehensive review of the existing data collection and tracking resources. Separately, MBTA has begun implementing Origami software to replace the Safety Department's existing safety database, IndustrySafe. The work of these teams will result in the development and execution of database modules which will provide a central repository for tracking safety risk information and mitigations and monitoring the effectiveness of corrective action plans.

## PLAN STRUCTURE

#	Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1	Establish CAP Advisory Group	Establish an advisory group of internal stakeholders to review and guide implementation of the corrective action plan.	QCOO: Katie Choe Safety: Ronald Ester	10/17/22	10/30/22 [A]
2	Strategic Planning Session	Conduct a strategic planning session for SD 22-10 Finding 6 CAP implementation with the advisory group identified in Actionable Item #1.	QCOO: Katie Choe Safety: Ronald Ester GM: Lynsey Heffernan	11/1/22	11/1/22 [A]
3	Procure Consulting Services	Issue RFP or Task Order for consulting services to evaluate the safety risk management process and incorporate changes into the Transit Safety Plan.	QCOO: Katie Choe Safety: Michael Catsos	11/16/22	12/22/22 [A]
4	Onboard Consultant	Onboard selected consultant.	QCOO: Katie Choe	12/23/22	2/17/23 [A]
5	Assess Existing Safety Data Tools and Processes	Compile and review all existing tools and processes used to document, track, and analyze safety data and monitor mitigations. Compare against SMS regulatory requirements, industry best practices, and TSP requirements.	QCOO: Katie Choe Safety: Mike Catsos	2/21/23	5/5/23 [A]
6	Develop Data Verification Guidelines	Develop and formalize guidelines for verification of data accuracy and safety risk indexing within Safety and with operational departments.	Safety	9/15/23	10/13/23
7	Assess Data Logging Process	Document process and resource issues that contributed to data inaccuracies described in Required Action 6.A. Mitigate these issues through process/procedure/workflow changes. Incorporate changes in SD 23-10, CAP 2R, AI 9 if required.	Safety	9/15/23	11/17/23
8	Review and Update Data Logs	Evaluate and revise the data contained in the hazard and safety risk mitigation logs for accuracy and relevancy to SMS requirements.  <b>Required Action 6A: Evaluate and Update Historic Data</b>	Safety	9/15/23	11/17/23

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date

<sup>3</sup> Est End Estimated Completion Date


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9	Track Development of Data Tools	Establish management reporting process and schedule to provide visibility on status of buildout, testing, and full implementation of Origami tools.	Safety	10/16/23	11/7/23
10	Review Effectiveness of Information Tools	Using FTA guidance as a framework, review the effectiveness of safety risk mitigation and monitoring information tools. If necessary, incorporate additional safety information management tools to address areas of ineffectiveness. This item to supersede AI 5.	Safety: SMS Lead	11/8/23	12/14/23
11	Workshop Data Products	Workshop existing data products with senior leadership to detail expectations for format and contents of actionable safety management information in future reports and dashboards.	Safety: SMS Lead	12/15/23	2/6/24
12	Establish Provisions for Ineffective Mitigations	Based on the results of management workshops and on SMS principles, establish explicit provisions to review/revise existing safety risk mitigations when not effective, authorize management action to address ineffective mitigations, and reallocate resources to address higher-priority safety concerns.	Safety: SMS Lead	2/7/24	4/4/24
13	Monitor & Optimize Effectiveness of Tools	Launch safety information management tools that provide the required information to effectively prioritize resources to address the results of Safety Risk Monitoring and Safety Performance Monitoring. The tools will be monitored for optimization opportunities and updated to reflect any necessary improvements. This monitoring and optimization phase will coincide with integration of risk tiers (SD 23-10, CAP 2R, AI 16) and elevation criteria (SD 23-10, CAP 2R, AI 22) into the risk software, as well as development of automated reporting (SD 23-10, CAP 2R, AIs 23 and 24).  <b>Required Action 6B: Build Out Information Tools</b>	QCOO Safety	4/5/24	12/27/24
14	Revise and Distribute Transit Safety Plan	Revise the Transit Safety Plan to reflect modifications to the safety risk management process.	Safety	6/3/24	8/30/24
15	Verify Effectiveness of Tools	Ensure safety information management tools – including automated reporting being developed under SD 23-10, CAP 2R, AI 24 – provide the required information to effectively prioritize resources to address the results of Safety Risk Monitoring and Safety Performance Monitoring.  <b>Required Action 6C: Demonstrate Effectiveness of Tools</b>	QCOO Safety	12/30/24	2/26/25



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<b>16</b>	CAP Verification	Evaluate actionable items/deliverables before submission to FTA to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the scope and performance measures.	Safety QCOO	1/9/25	4/9/25
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**COMPLETION DOCUMENTATION**

**Performance Metrics**

- Safety risks are tracked, and mitigations are monitored
- One system is used for safety risk management and safety assurance activities

**Verification**

- Existing data logs are revised to incorporate required SMS elements and updated
- SMS training materials are revised, and training is tracked and completed by the appropriate personnel
- Modules for safety risk management and safety assurance are developed and appropriately used
- Safety risk management tools effectively prioritize resources
- Updated Transit Safety Plan and safety assurance and safety risk management guidance documents

**BUDGET/COST ESTIMATE**

**Overview:** Costs for this corrective action plan include consulting services to support a comprehensive review of the safety risk management process and incorporate changes into the Transit Safety Plan, development of new training materials, and implementation of new training for involved personnel.

Segment Code	Cost Estimate (\$)
Consulting services for existing SRM process review and update of TSP	100,000
Development of new and revised virtual training materials	100,000
30% Contingency	60,000
<b>Total</b>	<b>260,000</b>

**CORRECTIVE ACTION PLAN COMMITMENT**

**Responsible Parties**

Department <sup>d</sup>	Name	E-mail	Signature
Safety	Michael Catsos <i>Director of SMS and Safety Oversight</i>	[Redacted]	DocuSigned by: <i>Dennis Lytton</i>
Operations	Ryan Coholan <i>Chief Operating Officer</i>	[Redacted]	DocuSigned by: <i>R. Coholan</i> DA71979273934C3...

<sup>d</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



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*Responsible Parties*

<b>Department<sup>d</sup></b>	<b>Name</b>	<b>E-mail</b>	<b>Signature</b>
Workforce	Ahmad Barnes <i>Chief Workforce Officer</i>	[REDACTED]	DocuSigned by: <i>Ahmad Barnes</i>
Finance	Mary Ann O'Hara <i>Chief Financial Officer</i>	[REDACTED]	DocuSigned by: C905D70689224D6... <i>Mary Ann O'Hara</i>
Information Technology	John Glennon <i>Chief Information Officer</i>	[REDACTED]	DocuSigned by: 3F02AECAC6884B1... <i>John R. Glennon</i>
Procurement	Jeff Cook <i>Chief Procurement &amp; Contract Administration Officer</i>	[REDACTED]	DocuSigned by: B97F518235C34CF... <i>Jeff Cook</i>
General Manager's Office	Lynsey Heffernan <i>Assistant General Manager for Policy &amp; Strategic Planning</i>	[REDACTED]	DocuSigned by: 682385F50D624B0... <i>Lynsey Heffernan</i>

**Executive Leadership of Responsible Parties**

DocuSigned by:  
*David Panagore*  
4348C5AFC6522457  
**David Panagore**  
MBTA Chief Administrative Officer

9/28/2023  
Date

DocuSigned by:  
*Meredith Sandberg*  
40C4D93D0658497  
**Meredith Sandberg**  
MBTA Chief of Quality, Compliance & Oversight

9/28/2023  
Date

DocuSigned by:  
*Timothy Lesniak*  
D93608B07A0B49F  
**Timothy Lesniak**  
MBTA Chief Safety Officer

9/29/2023  
Date



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DocuSigned by:

*Phillip Eng*

9/29/2023

**Phillip Eng**

*MBTA General Manager & CEO*

Date