

UNITED STATES DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

[Special Directive No. 22-4, Notice No. 1]

**Special Directive Under 49 U.S.C. § 5329 and 49 CFR Part 670
Required Actions to Address Findings from the Federal Transit Administration Safety
Management Inspection Conducted at the Massachusetts Bay Transportation Authority
Related to Track Maintenance**

AGENCY: Federal Transit Administration (FTA), U.S. Department of Transportation (DOT).

SUMMARY: FTA issues Special Directive 22-4 to require the Massachusetts Bay Transportation Authority (MBTA) to address ongoing safety concerns at MBTA and interim findings uncovered during FTA's Safety Management Inspection (SMI) that was initiated in April 2022. This Special Directive mandates that MBTA take nine required actions in three distinct categories related to maintenance of way (MOW). These required actions are to address deficiencies in personal protective equipment (PPE) and right of way (ROW) safety; to correct defective track conditions; and to address management practices that negatively impact track repair.

FOR FURTHER INFORMATION CONTACT: For program matters, Mr. Joseph DeLorenzo, Associate Administrator for Transit Safety and Oversight and Chief Safety Officer, telephone (202)-366-1783 or joseph.delorenzo@dot.gov; for legal matters, Ms. Emily Jessup, Attorney Advisor, FTA, telephone 202-366-8907 or emily.jessup@dot.gov.

SUPPLEMENTARY INFORMATION:

MBTA is a division of the Massachusetts Department of Transportation (MassDOT), providing heavy rail (subway), light rail bus, commuter rail, ferry, and paratransit service to eastern Massachusetts and parts of Rhode Island. While MBTA has recently embarked on a significant program of capital improvements, the agency faces systemic challenges in maintaining its aging infrastructure in a state of good repair and managing the ongoing operations of its complex equipment and systems. These challenges require greater focus, assessment, and resource prioritization, at all levels of the organization, to ensure that the system remains safe for both passengers and workers. Under FTA's State Safety Oversight Rule, the Massachusetts Department of Public Utilities (DPU) was certified in 2018 as the State Safety Oversight Agency charged with providing Federally required safety oversight of the MBTA rail transit system.

In response to MBTA's continued safety challenges, FTA decided in April 2022 to conduct a Safety Management Inspection (SMI) of MBTA. This Special Directive is based on the MBTA's ongoing safety issues and on the interim findings of FTA's SMI, which began in April 2022 and is still in progress. FTA is issuing this Special Directive while the SMI remains in progress because the SMI has revealed several serious safety issues that warrant immediate corrective action.

In 2021 and so far in 2022, MBTA has experienced several safety events resulting from deferred maintenance of assets in a poor state of repair, including six mainline derailments in 2021 (related to track, switches and/or vehicle conditions); accidents involving escalators and station facilities in poor condition; and safety events stemming from disabled trains, defective switches, and damaged equipment or tools in yards or maintenance facilities. MBTA's Engineering and Maintenance (E&M) Directorate serves as the primary custodian for the MBTA's physical infrastructure, including track, signals and communications, power, and facilities on the Red Line, Orange Line, Blue Line, and Green Line.

As a result of interviews, records reviews, on-site observations, and inspections conducted during part of the SMI, FTA finds that MBTA's E&M Directorate does not receive sufficient track access and resources to conduct a proactive inspection and maintenance program for MBTA's aging infrastructure. Further, while the E&M Directorate has a committed team working to transition the MBTA's paper-based recordkeeping system to digital records, the MBTA has not adequately resourced this transition; as a result, the agency does not have access to quality data regarding the state of its infrastructure to support safety decision making, maintenance planning, and selection of capital projects.

FTA further finds that while MBTA has a newly established and growing \$2 billion annual capital projects program, it spends just over \$70 million per year on the safety-critical MOW activities performed by the E&M Directorate. These critical activities include 24/7 emergency response to infrastructure failures; daily preventative maintenance and corrective repairs; inspections of safety critical infrastructure, such as track, switches, signals, stations, structures, and power system components; assistance for capital construction; and support for vehicle maintenance.

MBTA's E&M Directorate performs most of its critical activities, except for inspection of facilities and at-grade system components, during the nighttime maintenance window. Currently, that window affords only between two and two-and-a-half hours of track access. In that window of time, MBTA's MOW team may, for example, be able to replace 6 to 12 ties or 80 restraining rail bolts, complete inspections of individual power or signal system assets, or repair a section of a station platform or a rail joint. While the maintenance needs of the system are far greater than those addressable in the short nighttime maintenance windows, MBTA has, to date, not scheduled more substantial track access for MOW activities, even though it does schedule diversions and surges for capital projects.

Failures in aging work trains and other equipment further limit the ability of MOW personnel to access some of the MBTA's more challenging locations with equipment and supplies needed to perform corrective maintenance. For example, the SMI revealed that MBTA's Green Line work train has been inoperable for at least 8 months. In addition, MBTA lacks the capability to perform thermite welds, forcing it to rely on contractors to tie in rail, and it struggles in maintaining a crew to operate its production tamper. Some E&M divisions struggle with the performance of preventive maintenance inspections, and there is concern that aging assets may be deteriorating without a clear plan in place for corrective maintenance or renewal.

Records reviewed by FTA indicate that, under these conditions, between January 1, 2021 and April 29, 2022, MBTA has a growing backlog of open (4,195) and pending (12,423) defects related to track, signals and communication, power, and facilities. As reported in April and May of 2022, MBTA has almost 10

percent of its heavy rail track and over two miles of light rail track (mostly in the Central Subway) under speed restrictions. As part of the SMI, FTA inspected track on the Orange Line south of Tufts Medical Center Station that has been subject to speed restrictions since 2019. FTA found that portions of track displayed evidence of excessive wear and defects. These conditions were, in turn, managed through gauge rods, some of which showed signs of corrosion.

FTA further determined that MBTA focuses almost exclusively on addressing “red” condition defects – the most serious defects with the potential for failure, and which may require speed restrictions or removal of infrastructure elements from service. This focus on “red” conditions is due to both lack of track access and staffing shortages that leave some technical and supervisory positions with staffing vacancies approaching 20 percent. Focusing almost exclusively on “red” conditions leaves the MBTA rail system vulnerable to multiple risks. First, the system is exposed to the risk of undetected deterioration in restricted assets that potentially renders them out-of-service. Second, the system faces the risk that combinations of conditions in the less severely assessed “yellow” category collectively could approach an out-of-service condition.

These issues are compounded by inconsistent compliance with inadequate policies. For example, during the SMI, FTA found that MBTA has not established consistent PPE requirements for ROW access. In addition, FTA determined that MOW personnel and contractors do not consistently follow MBTA’s established PPE requirements or ROW safety procedures.

This Special Directive identifies nine required actions that the MBTA must take to address systemic MOW deficiencies requiring corrective action. FTA and DPU will oversee MBTA activity to implement these safety-critical required actions across its system.

As MBTA works to improve the quality of its MOW programs, the findings and required actions outlined in this Special Directive will assist the agency in focusing its attention on safety-critical priorities as it addresses these immediate concerns.

Additionally, FTA will work with DPU and MBTA to review and revise all pre-existing corrective action plans as appropriate to ensure that MBTA continues to make timely progress towards building and maintaining a robust safety culture within the agency.

DIRECTIVE AND REQUIRED ACTIONS:

In accordance with 49 U.S.C. § 5329 and 49 CFR Part 670, FTA directs MBTA to take the following actions:

Category 1: Personnel Safety			
Findings		Required Actions	
Finding 1	MBTA has not established consistent PPE requirements for ROW access.	FTA-TRA-22-001	MBTA must establish consistent PPE requirements for ROW personnel access. Personnel is inclusive of all employees, contractors, oversight, or other individuals

			who access the rail system and facilities.
Finding 2	MOW personnel and contractors do not consistently follow MBTA's established PPE requirements or ROW safety procedures.	FTA-TRA-22-002	MBTA must implement and document consistent MOW compliance with ROW safety procedures, including PPE requirements for all personnel. Personnel is inclusive of all employees, contractors, oversight, or other individuals who access the rail system and facilities
Category 2: Required Track Maintenance			
Findings		Required Actions	
Finding 3	The curved track section on the Orange Line between the Tufts Medical Center and Back Bay Stations (both north- and south-bound) has been under speed restriction for an extended period dating back to 2019 due to excessive wear and defects.	FTA-TRA-22-003	MBTA must correct the track defects between Tufts Medical Center and Back Bay Stations on both north- and south-bound tracks.
Category 3: Management Practices			
Findings		Required Actions	
Finding 4	MBTA does not provide adequate time to complete necessary MOW maintenance activities.	FTA-TRA-22-004	MBTA must document its MOW maintenance needs and develop and implement a schedule to ensure adequate track access to meet maintenance requirements.
Finding 5	MBTA's MOW departments have growing maintenance needs.	FTA-TRA-22-005	MBTA must develop and implement work plans to address MOW maintenance needs and manage on-going MOW workload.
Finding 6	MBTA's data on MOW defects and work order status is insufficient to guide management planning.	FTA-TRA-22-006	MBTA must expedite and sufficiently resource the transition to its new Enterprise Asset Management (EAM) system. In the meantime, MBTA must formalize and implement procedures and protocols to ensure the MOW managers and MOW inspectors share information and establish data-driven maintenance priorities.
Finding 7	MBTA's MOW department is not providing prioritized and actionable information to	FTA-TRA-22-007	MBTA must develop and implement a process and reporting procedure that accurately communicates the number, severity, and significance of MOW defects to Executive

	Executive Leadership regarding the condition of MBTA's assets and infrastructure.		Leadership.
Finding 8	MBTA reports 9.6% of heavy rail track is under a speed restriction due to track defects and over two miles of Green Line track also are speed restricted. MBTA's management accepts an unsustainable level of speed restrictions due to deferred maintenance.	FTA-TRA-22-008	MBTA must develop and implement a special maintenance repair plan to reduce the percentage of system track that is under a speed restriction.
Finding 9	MBTA's Green Line work train has been inoperable for at least 8 months.	FTA-TRA-22-009	MBTA must restore Green Line work train capabilities.

Thirty (30) calendar days after the date of this Special Directive, MBTA must submit a corrective action plan(s) to FTA and DPU that identifies the specific actions that will be performed to address required action specified in this Special Directive; the milestone schedule for completing corrective action; the responsible parties for action and their contact information; and the verification strategy for ensuring the completion of required work.

FTA, in consultation with DPU, will review and approve (with revisions as necessary) MBTA's corrective action plan(s) and will monitor the agency's progress in resolving each finding and required action.

FTA will continue to conduct bi-weekly meetings with MBTA and DPU to review progress until such time as FTA determines that these meetings are no longer needed or may be conducted with less frequency.

PETITIONS FOR RELIEF OR RECONSIDERATION

As set forth in 49 CFR § 670.27(d), the MBTA has thirty (30) calendar days from the date of this Special Directive to petition for reconsideration with the FTA Administrator. The petition must be in writing and signed by the Chair of the MBTA and must include a brief explanation of why the MBTA believes the Special Directive should not apply to it or why compliance with the Special Directive is not possible, is not practicable, is unreasonable, or is not in the public interest. In addition, the petition must include relevant information regarding the factual basis upon which the Special Directive was issued, information in response to any alleged violation or in mitigation thereof, recommend alternative means of compliance for consideration, and any other information deemed appropriate. Unless explicitly stayed or modified by the Administrator, this Special Directive will remain in effect and must be observed pending review of a petition for reconsideration.

Within ninety (90) days of receipt of the petition, the Administrator will provide a written response. In

reviewing the petition, the Administrator shall grant relief only where the MBTA has clearly articulated an alternative action that will provide, in the Administrator's judgment, a level of safety equivalent to that provided by compliance with this Special Directive. In reviewing any petition for reconsideration, the Administrator shall grant petitions only where the MBTA has clearly articulated legal or material facts not in evidence at the time of this Special Directive.

ENFORCEMENT

FTA may take enforcement action for any violation of this Special Directive or the terms of any written plan adopted pursuant to this Special Directive in accordance with FTA's authorities under 49 U.S.C. § 5329, including but not limited to (1) directing MBTA to use Federal financial assistance to correct safety deficiencies; (2) withholding up to 25 percent of financial assistance to MBTA under 49 U.S.C. § 5307; and (3) issuing restrictions or prohibitions (*e.g.*, mandatory speed restrictions, shutdown of a rail line, or complete system shutdown) as necessary and appropriate to address unsafe conditions or practices that present a substantial risk of death or personal injury.

Issued on: June 15, 2022



Veronica Vanterpool

Deputy Administrator
Federal Transit Administration
U.S. Department of Transportation