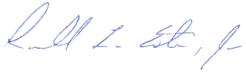




Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Gina Fiandaca, Secretary & CEO
Phillip Eng, General Manager & CEO



To: Engineering & Maintenance

From: Ronald L. Ester, Jr. 

Date: August 4, 2023

Subject: Safety Directive 03-2023
Prohibition of Working On or Near Unprotected Energized 3rd Rail

Energized Traction Power Systems present a significant risk in rail transit operations. It is the responsibility of the MBTA to protect our employees from harm with regards to energized systems.

Effective immediately, MBTA – Engineering & Maintenance (E&M) will prohibit any work on or near unprotected energized 3rd rail. Any work that needs to be performed on or near 3rd rail will require the Traction Power System to be de-energized or that 3rd rail protective covers be installed.

Background

On August 2nd, 2023, the MBTA Signal Department was contacted to respond to a dropped track circuit at the Quincy Center crossover northbound. Wirepersons arrived on scene and in the process of performing their work on ground wires, a wire made contact to the third rail. This produced an arc flash in the vicinity of both workers.

Upon the arrival of EMS, one wireperson's fingers were treated with a report of no injuries. The second wireperson was transported from the scene for electrical burn marks on their left-hand fingers, as well as flash injuries to their eyes.

Required Actions

E&M will perform the following actions:

1. E&M will take immediate action to update the November 30, 2012 Directive (attached) to include all E&M employees, retrain and distribute the directive among all E&M staff, as well as collect signatures from all active E&M employees.
2. Distribute Safety Flash regarding 3rd Rail Hazards to all E&M employees (attached).
3. Modify Corrective Action Plan #8401 to address the entire E&M department which will include:
 - a. The development of a documented procedure for performing maintenance on the system parallel to the contact rail which will require power off and tested open (off) in the field or protective covers installed prior to any work taking place.
 - b. Provide written and approved SOP and training on the procedure to all E&M employees that perform maintenance near the third rail.



Deval L. Patrick, Governor
Timothy P. Murray, Lt. Governor
Richard A. Davey, MassDOT Secretary & CEO
Jonathan R. Davis, Acting General Manager
and Rail & Transit Administrator



Directive:EM-DIR-2012-2

MEMORANDUM

TO: E&M Maintenance of Way Team Members

FROM: Andrew Baker, Director of Physical Infrastructure Maintenance

RE: Directive Contact Rail

DATE: November 30, 2012

On Tuesday, November 27th, MoW had uncovered a crack on the Left Hand Running Rail outside the North bound track at South Station. The damaged LHR runs parallel to the contact rail which rest approx. 1' - 8 7/16" from the centerline of the contact rail to the gage face of the LHR. During this time MoW systems repair persons (trackwalkers) initiated a Safety Challenge and requested that the power be removed prior to the start of repairs. Personnel on scene from outside E&M attempted to circumvent the challenge by suggesting that contact covers could and should be used to protect against the 600 volts, thus reducing the shutdown time. I then issued a direct order that NO repair be conducted until power was removed and tested dead in the field. The support of all Safety Challenges must be taken seriously.

Working within two feet of live contact rail was part of the on scene Hazard analysis taken. Other analysis identified and included were the lengths of steel hand tools used (track wrench 3', straight bar or claw bar 6', wooden contact covers 4', etc.), tripping hazards, distances of contact rail to running rail (less than two feet), rail drill use (reducing clearances from running rail to contact rail by 12"). This led to the inception of a SOP that removes any potential compromise in safety for all crews responding to emergencies.

Directive for E&M MoW crews working adjacent to all Contact rails (#150, #85, #84c).

Effective immediately, any work on rail parallel to the contact rail will require power off and tested open (off) in the field prior to any work taking place on that rail. This is for the protection of E&M Maintenance of Way crews working on or around live contact rails. This Directive must be initiated regardless of service conditions.

E&M's Maintenance of Way management team will develop a Standard Operating Procedure (SOP) for this purpose in the near future. Until such time, this Directive will be in full effect.

August 4, 2023
ISSUE: 23-11

SAFETY FLASH

SAFETY HOTLINE
617-222-SAFE

Working Near Third Rail



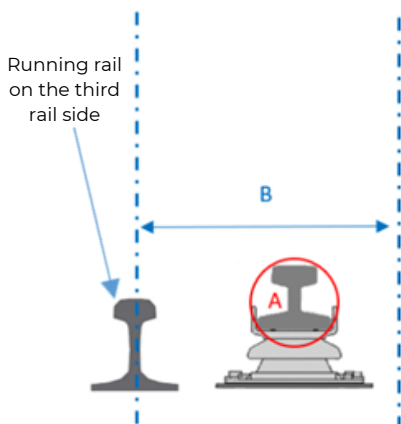
DETAIL >

Working Near Third Rail

Conducting work between the third rail and the running rail on the third rail side (area B in diagram) IS **PROHIBITED** unless one of the conditions below is met:

- Power is isolated and tested dead
- Supervisory switch off and tested dead
- An ASTM standards-meeting third rail protective shield is applied properly while work is performed

IF WORK IS BEING DONE DIRECTLY ON THE THIRD RAIL (AREA A IN DIAGRAM) POWER MUST BE ISOLATED AND TESTED DEAD.



If you observe an unsafe activity or work site on or near the ROW, you must immediately call the OCC Dispatcher to report the unsafe activity. Safety is everyone's responsibility!

APPLICATION>

WHOM IT AFFECTS

This may affect any Engineering & Maintenance employee or contractor who conducts work near 3rd rail.



MITIGATE THE HAZARDS

Third Rail Protective Shield

- Third rail protective shields must meet the requirement of the ASTM standards for the shield in use. These requirements can be found within NFPA 70E's "Standards for Electrical Safety in the Workplace," chapter titled "Work Involving Electrical Hazards" in the table titled "Standards on Other Protective Equipment".
- Wood third rail covers and other shields that do not meet the above standards **SHALL NOT BE USED** and must be discarded.
- The protective shield **MUST** fully guard the third rail directly adjacent to where the work is performed. If the work extends such that one third rail protective shield cannot safely guard all directly adjacent third rail, additional third rail protective shields must be used for the work to occur.

Other Important Reminders Reminders

ROW PPE must always be worn as required, even if additional safety mitigations, such as power isolation or use of a third rail protective shield, are taken. Additional PPE, such as FR or AR clothing, may be required depending on a Job Hazard Analysis conducted for that specific task.