



W-0419 – Red Signal Overrun near Eastern Market Station – April 20, 2025

Document Purpose:

This WMSC written report on WMATA Metrorail's safety event investigation and review of Metrorail's findings in accordance with the WMSC Program Standard, in conjunction with the attached Metrorail investigation report that has undergone WMSC staff review, feedback, and Metrorail revision, describes the investigation activities, identifies factors causing or contributing to the accident, and sets forth ongoing, additional, or upcoming corrective actions and further oversight work (such as inspections and audits) as necessary or appropriate. The WMSC's ongoing oversight during the investigative process, including safety event reporting and verification, participation in investigative interviews, data review, consistent communication with the Metrorail investigations team, and feedback on Metrorail's reports leads to further improvements prior to consideration of the reports by WMSC Commissioners for adoption. The WMSC's safety event investigation oversight assures the sufficiency and thoroughness of Metrorail's investigations. The WMSC Commissioners are considering these documents (the WMSC review and Metrorail's investigation report) as a unified item for adoption at the Washington Metrorail Safety Commission meeting on April 14, 2026.

WMSC staff recommends adoption of this investigation.

Red Signal Overruns

In 2025, Metrorail reported 11 red signal overruns, a decrease from the 14 reported in 2024. As of April 6, there have been three red signal overrun events in 2026, with two occurring in April. These overruns include trains and rail maintenance vehicles operating on both the mainline and in rail yards.

WMSC has conducted its own independent review of these events as they occur to understand the contributing causes and to explore methods that WMATA can implement to prevent recurrence. The WMSC has discussed possible mitigations for Metrorail to consider to reduce red signal overruns, including the use of plain language in communications between rail vehicle operators and control center personnel to avoid confusion, and reinforcing the less prevalent signal locations on the left side of the roadway through formalized territory familiarization training.

Following the WMSC's completion of an in-depth review of Metrorail's safety certification of the Automatic Train Operations project, the WMSC concurred on December 9, 2024 (Red Line), May 20, 2025 (Yellow/Green lines), and June 12, 2025 (Blue/Orange/Silver lines) that Metrorail had completed the safety certification process required to implement automatic train operations.

Automatic Train Operations (ATO) is not used in rail yards or during rail maintenance vehicle operation. There are additional instances when ATO cannot be used, including when trains are single-tracking or operating through an interlocking with a signal failure, as well during severe weather. The incident train in this red signal overrun was not in ATO.

Safety event summary:

On Sunday, April 20, 2025, the Train Operator of Silver Line Train 612, operated the train past a red signal outside Eastern Market Station, at the Eastern Market Interlocking, trailing a switch and causing the interlocking to go out of correspondence, resulting in temporary train service suspension and damage to the switch.



At approximately 10:24 p.m., after setting a crossover move from track 2 to track 1 at the Eastern Market Interlocking for the train operator of Train 739, which was out of service, a control center rail traffic controller gave the train operator of Train 612 a permissive block¹ and instructed them to hold no closer than 10 feet from red signal D06-08. One minute later, Train 612's operator overran the signal, which was still displaying a red aspect, indicating the requirement to stop. During an investigative interview following the event, the train operator indicated that although they correctly repeated back the instructions to the rail traffic controller, they did not realize the signal was on their left side. A later review of vehicle monitoring system data showed that the train lost speed commands 667 feet before reaching red signal D06-08. This loss of speed commands occurred because Train 739 was occupying track 2 at Eastern Market Station. After losing speed commands, the train operator entered Stop and Proceed² mode without the required permission from the rail traffic controller. After continuing into the interlocking, Train 612 trailed switch 3B, which had been remotely set to the reverse position by the rail traffic controller in preparation for the crossover move they had instructed Train 739's operator to make. Train 739 cleared the interlocking prior to the train operator of Train 612 passing the red signal.

When interviewed, the train operator stated that they entered Stop and Proceed mode because they had been granted a permissive block by the rail traffic controller. The train came to a stop approximately 124 feet past the red signal and then initiated the Stop and Proceed mode, operating to Eastern Market Station.

The damage to the switch caused the interlocking to go out of correspondence, and train service was suspended between Federal Center SW and Stadium-Armory stations. When asked by the rail traffic controller if they had overrun a red signal, the train operator stated that all their signals had been lunar (proceed). During a later interview, the train operator, who had just certified for the position approximately a month prior, state that they had been taught that all signals were located on the right side of the roadway, except for at Brentwood Yard, therefore they had not been looking on the left side where the red signal was located. The rail traffic controller instructed the train operator to offload customers from their train to the platform at Capitol South Station. WMATA personnel responded, clamped switches in the normal position, and limited train service was restored with trains temporarily passing red signals on track 2 with control center permission. Normal service to both tracks was later restored.

The Train Operator was removed from service for post-incident toxicology testing, and the train was transported to West Falls Church Yard for post-event inspection.

The causes and contributing factors to the red signal overrun event include:

- Failure to follow established procedures
 - Train Operator entered stop and proceed without permission
- Loss of/lack of focus and situational awareness
- Lack of territory familiarization

Investigations W-0419 led to specific recommended corrective actions (RCA), including:

¹Permissive Block: A section of clear track ahead of a train in the established direction of traffic up to a specific point into which no other train, vehicle or track obstruction is permitted.

² Stop and Proceed: A mode that allows a train to be moved in manual mode with Automatic Train Protection when no speed or door commands are being received.



- Involved personnel attended refresher training with the emphasis on signal location.
- WMATA disseminated a notice to Rail Operation Supervisors to increase discussions with rail vehicle operators on the importance of Point and Call.

Metrorail is in the process of implementing WMSC-required corrective action plan C-0183, which addresses the finding that Metrorail creates safety risks by not requiring and not conducting territory familiarization and physical characteristics training and not assessing knowledge of physical characteristics prior to assigning operations personnel work on a line, in a terminal or in a yard (scheduled completion date October 2026).



Washington Metropolitan Area Transit Authority
Department of Safety
Office of Safety Investigations

FINAL REPORT OF INVESTIGATION A&I E25538

| | |
|---|--|
| Date of Event: | April 20, 2025 |
| Type of Event: | O-8: Red Signal Overrun |
| Incident Time: | 22:25 Hours |
| Location: | Eastern Market Station |
| Time and How received by Safety: | 22:52 hours Safety Information Official (SIO) |
| Washington Metrorail Safety Commission (WMSC) Notification Time: | 00:25 Hours |
| Responding Safety Officers: | Office of Safety Investigations (OSI) |
| Rail Vehicle: | Train ID 612 (L7178-79x7745-44x7599-98T) |
| Injuries: | None |
| Damage: | Switch 3B (bent switch rod and damaged switch point) |
| Emergency Responders: | Metro Transit Police Department (MTPD) |
| Safety Universal Data System (SUDS) Number | 20250421#125837MX |

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

Page 1

Eastern Market Station – Red Signal Overrun

April 20, 2025 Table of Contents

| | |
|---|----|
| Abbreviations and Acronyms----- | 3 |
| Executive Summary ----- | 4 |
| Incident Site ----- | 4 |
| Field Sketch/Schematics ----- | 5 |
| Purpose and Scope ----- | 5 |
| Investigative Methods----- | 5 |
| Investigation ----- | 6 |
| Chronological Event Timeline----- | 8 |
| Advanced Information Management System (AIMS) ----- | 9 |
| The Office of Chief Mechanical Officer / Vehicle Monitoring and Diagnostic System (VMDS)----- | 11 |
| Office of Communications and Signaling – Signaling Engineering----- | 13 |
| Office of Rail Transportation ----- | 14 |
| Interview Findings and Written Statements ----- | 14 |
| Weather ----- | 14 |
| Related Rules and Procedures ----- | 14 |
| Human Factors ----- | 15 |
| Fatigue----- | 15 |
| Post-Incident Toxicology Testing ----- | 16 |
| Findings ----- | 16 |
| Immediate Mitigation to Prevent Recurrence ----- | 16 |
| Probable Cause Statement----- | 17 |
| Recommended Corrective Actions ----- | 17 |
| Appendices ----- | 18 |
| Appendix A – Interview Summary ----- | 18 |
| Appendix B – Signal Engineering Investigation Report ----- | 19 |
| Appendix C – Why-Tree Analysis----- | 24 |

Abbreviations and Acronyms

| | |
|--------------|--|
| AIMS | Advanced Information Management System |
| AOM | Assistant Operations Manager |
| ARS | Audio Recording System |
| CCTV | Closed-Circuit Television |
| ERT | Emergency Response Team |
| IIT | Incident Investigation Team |
| MICC | Metro Integrated Command and Communications Center |
| MOR | Metrorail Operating Rulebook |
| MTPD | Metro Transit Police Department |
| NOAA | National Oceanic and Atmospheric Administration |
| OSI | Office of Safety Investigations |
| RTC | Rail Traffic Controller |
| RTRA | Office of Rail Transportation |
| RVO | Rail Vehicle Operator |
| SIO | Safety Information Official |
| SMS | Safety Measurement System |
| VMDS | Vehicle Monitoring and Diagnostic System |
| WMATA | Washington Metropolitan Area Transit Authority |
| WMSC | Washington Metrorail Safety Commission |

Executive Summary

**Note that all times listed are approximate and may contain minor variations due to differences between systems of record. **

On Sunday, April 20, 2025, at 22:24 hours, the Rail Section of the Metro Integrated Command and Communications Center (MICC) aligned a crossover move at the Eastern Market interlocking for Train ID 739 to crossover from Track 2 to Track 1 at signal D06-06 with a lunar aspect. The Radio Rail Traffic Controller (RTC) instructed the Rail Vehicle Operator of Train ID 612 to hold no closer than 10 feet of D06-08 signal red. At 22:25 hours, Train ID 612 (L7178-79x7745-44x7599-98T), a six-car 7000-series consist, experienced a red signal overrun prior to arriving at Eastern Market Station.

As a result, when Train ID 612 reached switch 3B, it trailed the switch in the reverse position, forcing it open and damaging both the switch point and switch rod. This event caused the Eastern Market interlocking out of correspondence, rendering it inoperable via remote operation by the MICC. Consequently, train service was suspended between Federal Center SW and Stadium-Armory Stations.

The Emergency Response Team (ERT) responded to the scene, conducted an inspection, and identified damage to switch 3B. After inspecting the interlocking, ERT clamped switches on both Tracks 1 and 2 in the normal position to restore limited service. Service resumed on Track 1 under lunar signals. However, Track 2 movements required the MICC’s authorization to pass signal D06-08 displaying a red aspect.

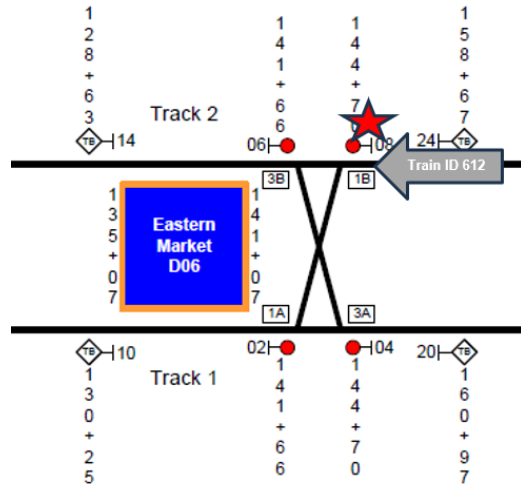
The RVO of Train ID 612 was removed from service and transported for post-incident testing. The train was transported to West Falls Church Yard for inspection and analysis. Revenue service was restored at 00:34 hours. No injuries were reported.

The probable cause for the Red Signal Overrun that occurred at Eastern Market Station on April 20, 2025, was due to a lack of mainline situational awareness. Although the RVO repeated the instructions, they were unsure of what actions were required. A contributing factor was the Operator’s misconception that there was only one left-side aligned signal in the system, Brentwood Yard; however, Eastern Market Station interlocking signal is on the left.

Incident Site

Eastern Market Station is an indoor station featuring a center platform. The Eastern Market Station interlocking is a diamond configuration made up of four switches, allowing for both normal (straight rail) movements and reverse (turnout or crossover) movements. The interlocking is located on the outbound side of the station.

Field Sketch/Schematics



The above depiction is not to scale.

Purpose and Scope

The purpose of this accident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

Investigative Methods

The investigative methodologies included the following:

- Physical site assessment
- Formal Interviews – Safety interviewed one individual as part of this investigation. The interview included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). Safety interviewed the following individual:
 - Rail vehicle Operator – Train ID 612
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Written statements were reviewed from personnel present during the event.
- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:
 - Metrorail Operating Rulebook (MOR)
 - National Oceanic and Atmospheric Administration (NOAA)
 - RVO's 30 Day Work History
 - RVO's Manifest
 - RTRA Division Managerial Report
 - RTRA Supervisor Report

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

Page 5

- Signal Engineering Investigation Report
- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
 - Audio Recording System (ARS) playback
 - Closed-Circuit Television (CCTV)
 - Vehicle Monitoring and Vehicle Diagnostic (VMDS) Data
 - Advance Information Management System (AIMS)

Investigation

On Sunday, April 20, 2025, at 22:24 hours, the Rail Section of the MICC aligned the switches at the Eastern Market Station interlocking for Train ID 739 to crossover from Track 2 to Track 1 at signal D06-06 with a lunar aspect. The Audio Recording System (ARS) revealed that the Radio RTC instructed Train ID 612 to hold no closer than 10 feet of signal D06-08, which was displaying a red aspect.

During the formal interview, the RVO stated that they repeated the instructions from the Radio RTC, but did not fully understand their instructions since it was the first time being given a block to a signal and not to the 8-car marker at a station.

The vehicle monitoring and diagnostic system (VMDS) data from Train ID 612 showed that after departing Potomac Avenue Station, Train ID 612 lost speed commands 667 feet away from D06-08 signal. After stopping, the RVO initiated Stop and Proceed mode without permission from the RTC.

The RVO stated that they entered Stop and Proceed mode because the Radio RTC granted a permissive block and was confused about where they were when they initiated Stop and Proceed.

At 22:25 hours, Train ID 612 (L7178-79x7745-44x7599-98T), a six-car 7000-series consist, overran signal D06-08 before arriving at Eastern Market Station. The train did not exceed 15 mph after Stop and Proceed mode was initiated, which allowed the train to pass the red signal. The RVO stated they were taught there was only one left side signal in the rail system and that was at Brentwood Yard. The RVO training documentation showed that they completed on the job training on the line that they turned in to, Silver Line, so they received 30 hours of stick time on the mainline and an additional eight hours when they reported to the division.

To crossover Train ID 739, the switch alignment was set with switch 3B entry, 3A was set as an exit, causing it to be in a reverse position, and D06-08 signal was red. After Train ID 739 cleared the interlocking, Train ID 612 was observed via the Advanced Information Management System (AIMS) passing signal D06-08 while it displayed a red aspect. At the time of the overrun, the switch positions on Track 2 were: 1B in normal, 3B in reverse.

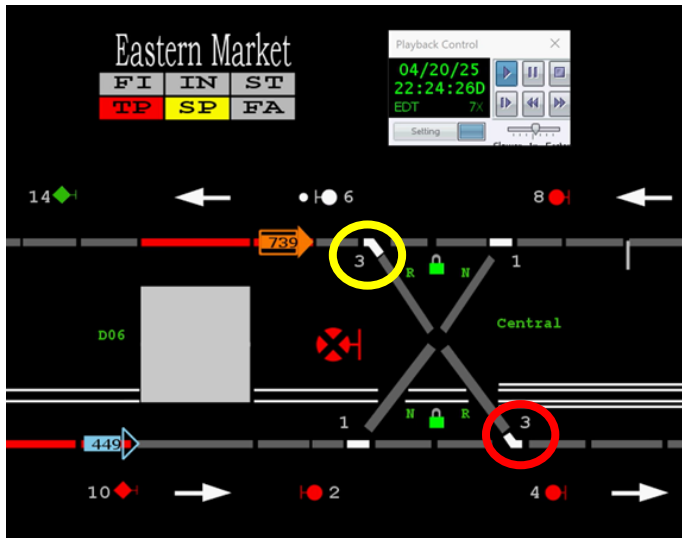


Figure 1: The yellow circle shows switch 3B was set as an entry and the red circle shows 3A was for an exit move.

At 22:26 hours, Train ID 612 stopped a second time, but was 124 feet past signal D06-08. The Operator again initiated Stop and Proceed mode and continued to Eastern Market Station. As a result, Train ID 612 trailed switch 3B, which was in the reverse position, forcing it open and causing damage to the switch point and switch rod.

This event led to the interlocking going out of correspondence, rendering it inoperable via remote operation by the MICC. Consequently, train service was suspended between Federal Center SW and Stadium-Armory stations.

ERT responded, conducted an inspection, and identified damage to switch 3B. After inspecting the interlocking, ERT clamped switches on Tracks 1 and 2 in the normal position to restore service. Limited service resumed; on Track 1 under lunar signals, and on Track 2, movements required MICC authorization pass signal D06-08 displaying a red aspect.

The RVO of Train ID 612 was removed from service and transported for post-incident testing. The train was transported to West Falls Church Yard for inspection and analysis. Normal service was restored at 00:34 hours. There were no injuries reported.

Chronological Event Timeline

A review of ARS playback, i.e., phone and radio communications, revealed the following timeline:

| Time | Description |
|------------------------------|--|
| 22:00:29 hours | <u>Train ID 739 RVO</u> : Informed the Radio RTC they were leaving Largo and lighting to New Carrollton. <u>Radio RTC</u> : Acknowledged the transmission [Radio Ops 2] |
| 22:05:37 hours | <u>Train ID 739 RVO</u> : Asked the Radio RTC where they were turning around. <u>Radio RTC</u> : Informed Train ID 739 RVO they would be clearing the interlocking at Eastern Market Station. <u>Train ID 739 RVO</u> : Acknowledged and repeated. [Radio Ops 2] |
| 22:23:43 – 22:25:03 hours | <u>Train ID 739 RVO</u> : Informed the RTC that they had reversed ends at Eastern Market Station. <u>Radio RTC</u> : Gave Train ID 739 RVO a permissive block to the turnback with at lunar signal at D06-06 signal. <u>Radio RTC</u> : Gave Train ID 449 RVO a permissive block to the 8-car maker at Eastern Market Station on track 1 and advised that D06-02 signal would be red. <u>Train ID 449 RVO</u> : Acknowledged and repeated their instructions. <u>Radio RTC</u> : Gave Train ID 612 RVO a permissive block no closer than 10ft to D06-08 signal red. <u>Train ID 612 RVO</u> : Asked the Radio RTC to repeat the signal. <u>Radio RTC</u> : Repeated the permissive block no closer than 10ft to D06-08 signal red. <u>Train ID 612 RVO</u> : Acknowledged and stated their block to Double 06-08 signal red. <u>Radio RTC</u> : Repeated Delta 06-08, Delta 06-08 over. <u>Train ID 612</u> : Replied Delta 06-08 over. <u>Radio RTC</u> : Acknowledged and closed out their transmission. [Radio Ops 2] |
| 22:27:12 hours | <u>Assistant Operations Manager (AOM)</u> : Alerted the Operations Manager (OM) of the switch out of correspondence at Eastern Market Station. <u>OM</u> : Informed the AOM to hold all trains there. [Phone Rail 1] |
| 22:28:14 hours | <u>AOM</u> : Informed the Radio RTC to hold all trains on track 2 from Eastern Market back. [Phone Rail 2] |
| 22:30:11 hours | <u>Radio RTC</u> : Asked Train ID 612 RVO for their location. <u>Train ID 612 RVO</u> : Informed the Radio RTC they were at Capitol South track 2. |
| 22:30:57 hours | <u>Radio RTC</u> : Asked Train ID 739 if they passed a red signal at Eastern Market. <u>Train ID 739 RVO</u> : Informed the Radio RTC that they had a lunar and was crossed over. <u>Radio RTC</u> : Acknowledged and asked Train ID 612 RVO if they ran a red signal at Eastern market. <u>Train ID 612 RVO</u> : Informed the Radio RTC that they did not run a red signal and that all their signals were lunar. |
| 22:33:59 hours | <u>Button RTC</u> : Informed the Downtown Largo Terminal Supervisor that they were suspending service between the D&G and Eastern Market. [Phone BL/OR] |
| 22:34:26 hours | <u>Radio RTC</u> : Instructed Train ID 612 RVO to offload their train at Capitol South and to walk through to verify clear of customers. <u>Train ID 612 RVO</u> : Acknowledged and repeated their instructions. [Radio Ops 2] |
| 22:35:17 hours | <u>OM</u> : Informed the Safety Information Official of the red signal overrun at Eastern Market Station. [Phone Rail 1] |

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

Page 8

| Time | Description |
|----------------|---|
| 23:23:25 hours | <u>ERT</u> : Informed the Radio RTC that they were standing by at Eastern Market station to perform an interlocking inspection. <u>Radio RTC</u> : Acknowledged and instructed ERT to standby until they setup their protections. [Radio Ops 2] |
| 23:29:03 hours | <u>Safety Investigator</u> : Informed the Radio RTC they were on the platform at Capitol South Station. [Radio Ops 2] |
| 23:37:50 hours | <u>Radio RTC</u> : Made a radio call for ERT. <u>ERT</u> : Acknowledged the Radio RTC. <u>Radio RTC</u> : Gave ERT permission to enter the roadway on tracks 1 and 2 and informed them that 3 rd rail was still energized. <u>ERT</u> : Acknowledged and repeated their instructions. [Radio Ops 2] |
| 00:06:33 hours | <u>ERT</u> : Requested permission to clamp all switches at Eastern Market interlocking in the normal. <u>Radio RTC</u> : Acknowledged and gave ERT permission to clamp all switches in the normal. [Radio Ops 2] |
| 00:13:52 hours | <u>ERT</u> : Informed the Radio RTC that all personnel and equipment were clear of tracks 1 and 2. The switches were clamped, and that they were relinquishing their foul time at Eastern Market Interlocking. <u>Radio RTC</u> : Acknowledged and asked if it was safe for train movement. <u>ERT</u> : Replied affirmative but asked for a test train on track 2. <u>Radio RTC</u> : Acknowledged. [Radio Ops 2] |
| 00:17:59 hours | <u>Radio RTC</u> : Gave Train ID 716 RVO a permissive block to Eastern Market Station track 2 with permission to pass D06-08 signal red and their speed not to exceed 5mph over clamped switches. <u>Train ID 716 RVO</u> : Acknowledged and repeated their instructions. [Radio Ops 2] |
| 00:32:50 hours | <u>Radio RTC</u> : Made blanket announcements for all trains instructed to hold, if it was safe to do so they could close and continue. [Radio Ops 2] |

***Note: Times above may vary from other system's timelines based on clock settings and reporting source.*

Advanced Information Management System (AIMS)

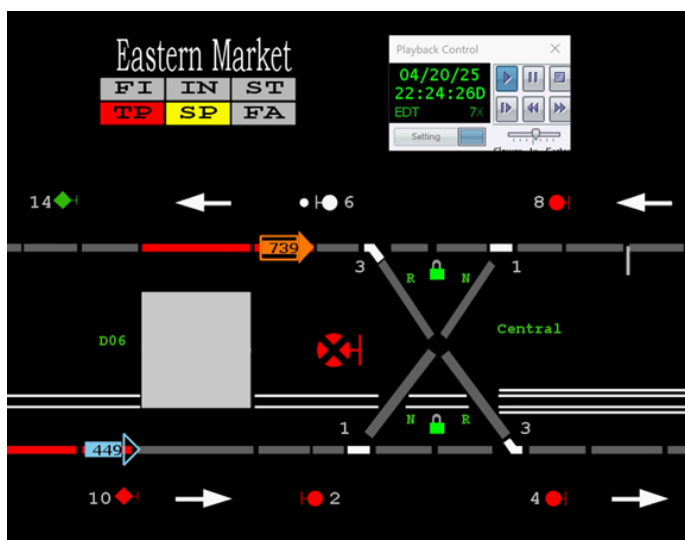


Figure 2: Shows Train ID 739 aligned for a crossover move.

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

Page 9

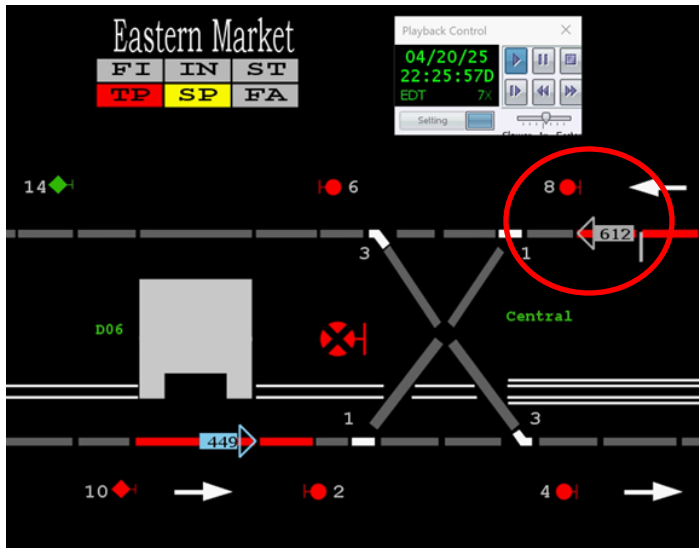


Figure 3: Shows Train ID 612 before passing the red signal.

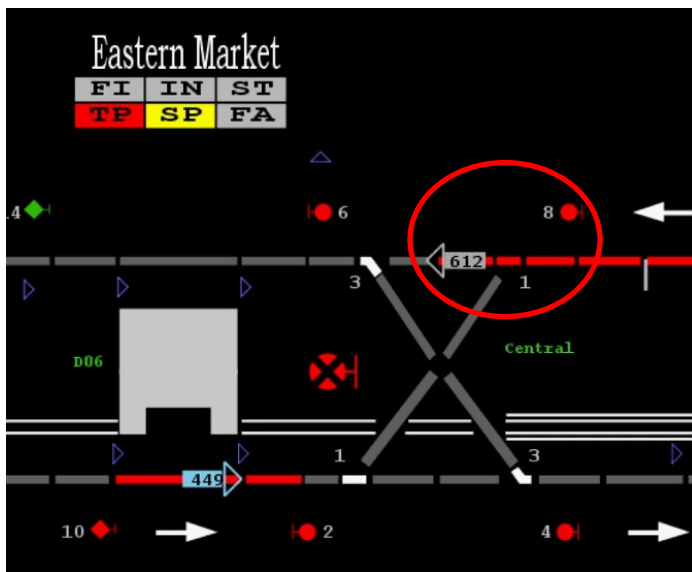


Figure 4: Shows Train ID 612 overran the red signal.

| Time | Location | Alarm | Geographical partition | Functional partition | Priority level |
|------------------------------|----------|---|------------------------|----------------------|----------------|
| Sun Apr 20 22:27:22 EDT 2025 | Eastern | Market D06-2 Signal Request Route COMMANDED Request Route BY SYSTEM AT vasc-hostapva | OB | LAMR | 1-EVENT |
| Sun Apr 20 22:27:21 EDT 2025 | Eastern | Market Eastern Mark ROUTE FROM D06-2 TO D06-4 REQUESTED BY AT vawksob-commpp | OB | LAMR | 1-EVENT |
| Sun Apr 20 22:27:18 EDT 2025 | Eastern | Market TRAIN 612 OVERRAN SIGNAL D06-8 WHICH WAS RED SINCE 2 ACKNOWLEDGED BY AT vawkspower8pp | OB | LAMR | 1-EVENT |
| Sun Apr 20 22:26:50 EDT 2025 | Eastern | Market TWC D06-----2 TRAIN 612 TRAIN ID UPDATED | OB | LA | 1-EVENT |
| Sun Apr 20 22:26:50 EDT 2025 | Eastern | Market TWC D06-----2 TRAIN 612 UPDATED DESTINATION CODE TO 68 | OB | LA | 1-EVENT |
| Sun Apr 20 22:26:50 EDT 2025 | Eastern | Market TWC D06-----2 TRAIN U43 RECEIVED ID 612 ALREADY ASSIGNED TO OTHER TRAIN AT D06-1BTN | OB | LA | 1-EVENT |
| Sun Apr 20 22:26:03 EDT 2025 | Eastern | Market TRAIN 612 OVERRAN SIGNAL D06-8 WHICH WAS RED SINCE 2 ACKNOWLEDGED BY AT vawksyg-commpp | OB | LAMR | 1-EVENT |
| Sun Apr 20 22:26:00 EDT 2025 | Eastern | Market TRAIN 612 OVERRAN SIGNAL D06-8 WHICH WAS RED SINCE 22:18:42 BY | OB | LAMR | 9-SMAJOR |
| Sun Apr 20 22:24:24 EDT 2025 | Eastern | Market TRAIN 739 TURNBACK ON TRACK D06-D2-138 | OB | LAMR | 1-EVENT |
| Sun Apr 20 22:24:02 EDT 2025 | Eastern | Market D06-4 Signal Request Route COMMANDED Request Route BY SYSTEM AT vasc-hostapva | OB | LAMR | 1-EVENT |
| Sun Apr 20 22:24:00 EDT 2025 | Eastern | Market Eastern Market ROUTE D06-6-4 IN PROGRESS | OB | LAMR | 1-EVENT |

The Office of Chief Mechanical Officer / Vehicle Monitoring and Diagnostic System (VMDS)

Adopted from Office of Chief Mechanical Officer IIT report with minor formatting and grammatical edits:

IIT completed an analysis of data from Train ID 612, Cars 7598-99x7745-44x7179-78, reported for a red signal overrun at Eastern Market Station (D06) Track #2 on 04/20/2025. Based on the NVR Video and ER data, Train ID 612, left Potomac Avenue station (D07), Track #2, in the direction of Eastern Market station (D06).

Lead car 7178 ER data confirmed prior to overrun the Red Signal at D06-08, the train lost speed commands and came to a complete stop 667 feet from the signal. Then, was placed in the Stop and Proceed Mode and started to move until it passed the signal.

At 22:25:57 hours, Lead car passed the Red Signal D06-08 at a speed of **13.5 MPH** with the Master Controller in the "P1-P4" Power position then came to a complete stop **124 feet** beyond the Signal.

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

Page 11

The Stop and Proceed Mode was initiated again 124 feet beyond the Signal D06-08 and the train started to move until it received the speed commands prior to entering Eastern Market Station. Then came to a complete stop at the platform limits at 22:27:22:410. The Emergency Brake was not initiated.

A- TIMELINE OF EVENTS

| Time | Description of Events | Master Controller | Train Speed | Regulated Speed | Limiting Speed | Distance to Signal D06-08 |
|----------|--|-------------------|-------------|-----------------|----------------|---------------------------|
| 22:23:36 | Train ID 612, left Potomac Avenue station (D07), track #2. | P5 | <1 MPH | 40 MPH | 40 MPH | 2,326 feet. |
| 22:24:02 | The speed limit dropped to 0 MPH. Overspeed Alarm activated and Full Service Brake applied. | P1-P4 | 36.4 MPH | 40 MPH | 0 MPH | 1,134 feet |
| 22:24:03 | Train lost speeds commands. The Regulated speed dropped to 0 MPH. Full Service Brake remains applied. | P1-P4 | 36.3 MPH | 0 MPH | 0 MPH | 1,097 feet |
| 22:24:14 | Overspeed Alarm silenced with the Master Controller moved to "B4" Braking position. | B4 | 13.2 MPH | 0 MPH | 0 MPH | 715 feet |
| 22:24:18 | Overspeed Alarm activated with the Master Controller moved to "B1-B3" Braking position. | B1-B3 | 2.2 MPH | 0 MPH | 0 MPH | 667 feet |
| 22:24:19 | Train came to a complete stop. | B1-B3 | 0 MPH | 0 MPH | 0 MPH | 667 feet |
| 22:25:03 | Stop and Proceed Mode initiated. | B4 | 0 MPH | 0 MPH | 1 MPH | 667 feet |
| 22:25:09 | Master Controller placed in "P1-P4" Power position and the train started to move toward Eastern Market's platform limit. | P1-P4 | <1 MPH | 0 MPH | 1 MPH | 667 feet |
| 22:25:57 | Train reached the D06-08 signal. | P1-P4 | 13.5 MPH | 0 MPH | 1 MPH | 0 foot |
| 22:25:58 | Overspeed Alarm activated with the Speed close to 15 MPH. Full Service Brake applied. 36 feet beyond the Signal D06-08. | Coast | 14.7 MPH | 0 MPH | 1 MPH | -36 feet |
| 22:25:59 | Stop and Proceed mode de-activated. 40 feet beyond the Signal D06-08. | Coast | 14.7 MPH | 0 MPH | 0 MPH | -40 feet |
| 22:26:01 | Overspeed Alarm silenced with the Master Controller moved to "B4" Braking position. 81 feet beyond the Signal D06-08. | B4 | 12.2 MPH | 0 MPH | 0 MPH | -81 feet |
| 22:26:07 | Train came to a complete stop. Overran the Red Signal D06-08 by 124 feet. | B4 | 0 MPH | 0 MPH | 0 MPH | -124 feet |
| 22:26:10 | Stop and Proceed Mode initiated. | B4 | 0 MPH | 0 MPH | 1 MPH | -124 feet |
| 22:26:26 | Master Controller placed in "P1-P4" Power position and the train started to move toward Eastern Market's platform limit. | P1-P4 | <1 MPH | 0 MPH | 1 MPH | -124 feet |
| 22:26:42 | The speed limit increased to 50 MPH. 347 feet beyond the Signal D06-08. | Coast | 13.0 MPH | 0 MPH | 50 MPH | -347 feet |
| 22:26:43 | Train received speeds commands. The Regulated speed increased to 50 MPH. 359 feet beyond the Signal D06-08. | Coast | 12.8 MPH | 50 MPH | 50 MPH | -359 feet |

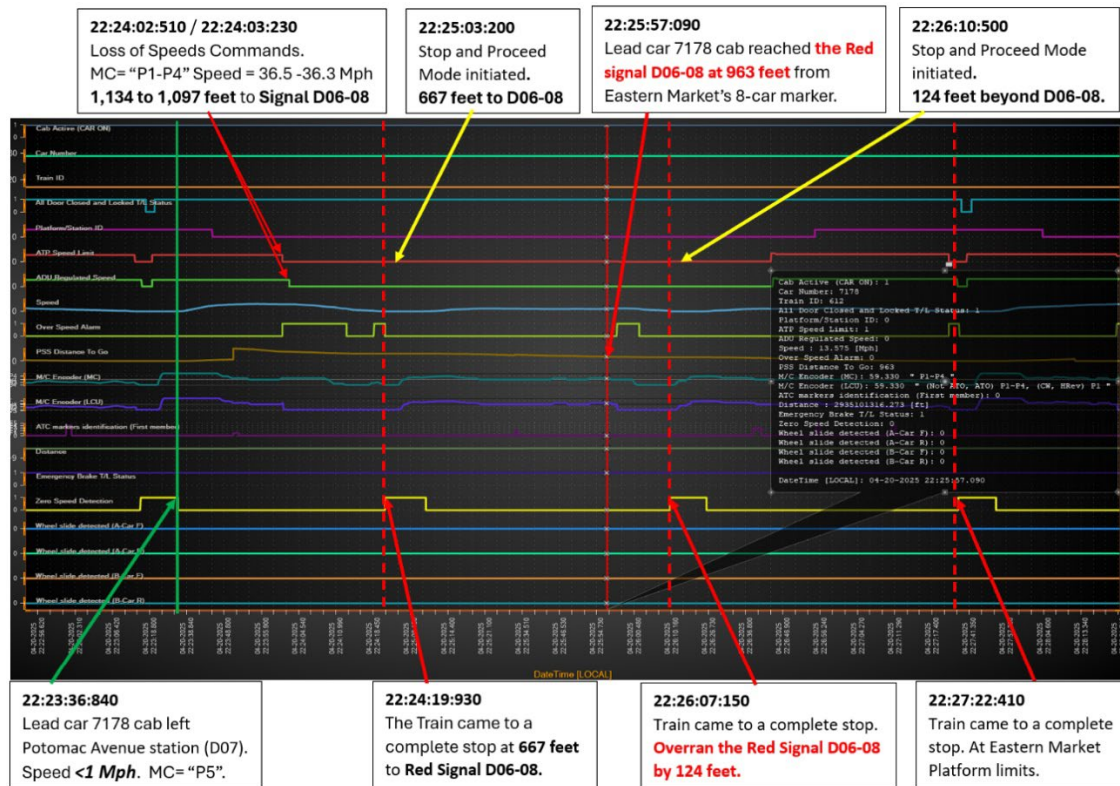
Incident Date: 04/20/2025 Time: 22:25 hours
 Final Report – Red Signal Overrun Rev. 1
 E25538

Drafted By: SAFE 703 – 06/16/2025
 Reviewed By: SAFE 707 – 06/16/2025
 Approved By: SAFE 707 – 06/16/2025

Page 12

| Time | Description of Events | Master Controller | Train Speed | Regulated Speed | Limiting Speed | Distance to Signal D06-08 |
|----------|--|-------------------|-------------|-----------------|----------------|---------------------------|
| 22:26:43 | Train entered Eastern Market station (D06) 363 feet beyond the Signal D06-08. | Coast | 12.8 MPH | 50 MPH | 50 MPH | -363 feet |
| 22:26:44 | The speed limit decreased to 45 MPH. 375 feet beyond the Signal D06-08. | Coast | 12.8 MPH | 50 MPH | 45 MPH | -375 feet |
| 22:26:44 | The Regulated speed decreased to 45 MPH. 386 feet beyond the Signal D06-08. | Coast | 12.8 MPH | 45 MPH | 45 MPH | -386 feet |
| 22:27:22 | Train came to a complete stop at Eastern Market's 8-car marker. 963 feet beyond the Signal D06-08. | B4 | 0 MPH | 0 MPH | 0 MPH | -963 feet |

B - 7178 ER GRAPH



Office of Communications and Signaling – Signaling Engineering

Adopted from the Signal Engineering Investigation Report:

“Interlocking worked normally prior to the incident. The train #739, preceding the incident train, entered D06 platform 2 at 22:18:52. This train destination code was 74 (New Carrollton Yard). This train stopped at D06 platform2, reversed ends and crossed D06 interlocking from track 2 to track 1. The next (incident) train #612, running to N12 (Ashburn, destination code 68) ran the signal 8 at RED, passed D06 (Eastern Market station), and continued toward B05 (Capitol South). The Incident train, running on track 2, entered D06 territory at 22.24.42 - shortly after the previous train crossed from track 2 to track 1, while D06 switch 3 still was in Reverse position and signal 8

Incident Date: 04/20/2025 Time: 22:25 hours
 Final Report – Red Signal Overtun Rev. 1
 E25538

Drafted By: SAFE 703 – 06/16/2025
 Reviewed By: SAFE 707 – 06/16/2025
 Approved By: SAFE 707 – 06/16/2025

was at Red/Stop state. At 22:26:00 hours, the incident train overran signal 8 at Red/Stop state, and at 22:26:44 hours, trailed switch 3B". Appendix B: Signal Engineering Investigation Report."

Office of Rail Transportation

Adopted from Office of Rail Transportation report:

"The red signal occurred at approximately 22:26 PM at Eastern Market Station. After the overrun train ID 612 was instructed to offload at Capitol South Station. Afterwards train service was suspended from Capitol South and Stadium Amory Stations. A RTRA Supervisor transported the Operator for post-incident testing at approximately 2304PM. At approximately 03:03AM, the Operator was interviewed by Dulles Management on the incident that took place at Eastern Market. While being interviewed by Dulles Management, the Operator stated the MICC gave her a block to a red signal and standby. The Operator stated that they were looking for a signal on the right side and not on left hand side."

Interview Findings and Written Statements

As part of the investigation launched into the event, Safety interviewed one person. The interview identified the following key findings associated with this event. Findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

Rail Vehicle Operator

- The RVO recently certified in March 2025.
- The RVO is assigned to Dulles Division.
- The RVO was assigned to the Dulles Yard on the day of the event but was given a block to operate by the Terminal Supervisor.
- When the RVO was in training, they were taught Metro is a right side signal system and the only left side signal was at Brentwood Yard.
- The RVO mentioned the Radio RTC's instructions did not really register because they had never been given a block governed to stop no closer than 10 feet of an interlocking signal only to the 8-car marker.
- The RVO stated they had a lunar signal when they departed Potomac Avenue Station.
- They RVO stated they never lost speed commands as they departed Potomac Avenue Station.
- The RVO did not experience any mechanical issues with the train.

Weather

On April 20, 2025, at the time of the incident, NOAA recorded the temperature as 77°F, with cloudy skies, winds 8.4 mph, and 52.2% humidity. Weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Washington, DC.

Related Rules and Procedures

Metrorail Operating Rulebook (MOR)

1.2.1 Employees involved in, witnessing, or informed of an accident or incident, to include near misses, on the Metrorail system shall inform their supervisor, Metro Transit Police Department, Rail Operations Control Center and/or other appropriate authority as soon as possible, and shall file a written report.

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

| |
|------------------------------------|
| Drafted By: SAFE 703 – 06/16/2025 |
| Reviewed By: SAFE 707 – 06/16/2025 |
| Approved By: SAFE 707 – 06/16/2025 |

Page 14

3.1.3 Rail vehicles shall be allowed to move on red signals with permission from the Rail Traffic Controller and in accordance with respective Operating Modes without clamping switches provided the following conditions are met: a. The signal is not associated with pocket track or turnout switch, b. Verbal confirmation that the signal is lunar, and the switches are normal on the opposing track, and c. Rail 1, 2, or 3 has approved the move.

3.3 Signals Requiring a Stop Rail vehicles shall not be operated past or closer than a point 10 feet in approach of an interlocking signal or lamp displaying a red aspect, a red flag, or a dark interlocking signal, except at a bump post or entering a pocket track, or unless authorized by the Rail Traffic Controller or the Interlocking Operator and the move is consistent with customer safety.

8.12 Rail Vehicle Operators stopped by a fixed signal, cab signal, loss of power, or unusual circumstances shall contact the Rail Traffic Controller or the Interlocking Operator immediately and be governed by their instructions.

12.4.3 Personnel shall not take any action until they are positive that all radio transmissions or receptions are heard, fully understood, and acknowledged. Individual radio transmissions shall always be repeated by the receiver so the transmitter can confirm that the message was received completely and by the intended receiver.

12.4.4 Whenever the transmitter has completed their transmission and is turning the airtime over to the receiving party for acknowledgment or reply, they are to end their communication with the word “over.”

12.4.5 Positive Identification must be established prior to transmitting a message. Positive identification includes the transmitter stating their Train/Equipment Number or Unit ID Number, location, and track number at the beginning of a transmission and the receiver repeating back the Train/Equipment Number or Unit ID Number, location, and track number when acknowledging the radio call.

Human Factors

Fatigue

Signs and Symptoms of Fatigue

We evaluated conditions at the time of the incident to distinguish whether evidence of fatigue was present. No sign of fatigue was indicated by the available data. Video of the incident was reviewed for behaviors suggesting fatigue. No indications of fatigue were evident from the video. The RVO reported feeling fully alert at the time of the incident. The RVO reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

We evaluated incident data for fatigue risk factors. No significant risk was identified. The incident time of day did not suggest an increased risk of fatigue-related impairment. The RVO reported keeping a regular sleep schedule in the days leading up to the incident. The RVO worked the day shift in the days leading up to the incident. The RVO was awake for 10.9 hours at the time of the incident. The RVO reported 14 hours of sleep in the 24 hours preceding the incident. The off-duty period was 18 hours which provides an opportunity for 7-9 hours of sleep. This was a comparable

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

| |
|------------------------------------|
| Drafted By: SAFE 703 – 06/16/2025 |
| Reviewed By: SAFE 707 – 06/16/2025 |
| Approved By: SAFE 707 – 06/16/2025 |

Page 15

amount of time as the RVO's usual workday sleep durations. The RVO reported no issues with sleep.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the RVO complied with the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Findings

- The Radio RTC instructed the RVO to stop no closer than 10 feet of D06-08 signal red.
- The RVO initially repeated back to stop at D06-06 signal but the Radio RTC corrected the radio transmission.
- Train ID 612 lost speed commands and came to a complete stop 667 feet before D06-08 signal red.
- Train ID 612 lost speed commands because Train ID 739 was on track 2 at Eastern Market Station about to perform a crossover move from track 2 to track 1.
- The RVO activated Stop and Proceed mode which allowed the train to pass D06-08 signal red.
- The RVO passed D06-08 signal before switch 3B could properly realign causing the switch to be trailed.
- Switch 3B had physical damage to the switch point and switch rod.

Immediate Mitigation to Prevent Recurrence

- In accordance with the Office of the Chief Mechanical Officer CMOR-IIT Operations Administrative Policy 102.06, the Metro Integrated Command and Communications Center (MICC) promptly removed Train ID 612 from revenue service for post-incident investigative measures. This action adhered to the Rail Vehicle Event Investigation Policy, ensuring a comprehensive incident examination.
- In adherence to Standard Operating Procedure 102-1, which outlines the protocol for Removing an Employee from Service for involvement in an operational safety event, the Rail Supervisor on scene relieved the RVO from duty for post-incident testing.

Probable Cause Statement

The probable cause for the Red Signal Overrun that occurred at Eastern Market Station on April 20, 2025, was due to a lack of mainline situational awareness. Although the RVO repeated the instructions, they were unsure of what actions were required. A contributing factor was the Operator's misconception that there was only one left-side aligned signal in the system, Brentwood Yard; however, Eastern Market Station interlocking signal is on the left.

Recommended Corrective Actions

| Corrective Action Code | Description | Responsible Party | Estimated Completion Date |
|-----------------------------------|---|--------------------------|----------------------------------|
| 125837_SAFE CAPS_RTRA _001 | The RVO completed refresher training with an emphasis on signal location within the rail system. | RTRA SRC | Completed |
| 125837_SAFE _CAPS_RTR A_002 | RTRA disseminated an Everbridge notice to Rail Operation Supervisors to increase discussions with RVOs on the importance of Point and Call and used a Rail Operations Personnel Notice. | RTRA SRC | Completed |

Appendices

Appendix A – Interview Summary


The below narrative summarizes the incident and represent the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

The RVO is a WMATA employee with less than a year of service. The RVO was an external hire and started training in November 2024. The RVO recently certified as a RVO in March 2025. The RVO is RWP Level 2 certified and must recertify in November 2026. The RVO reported feeling fully alert right before the incident. The RVO mentioned they did not experience any fatigue like symptoms. The RVO said they have not had any issues with their sleep recently.

The RVO has worked at the Dulles Division since certifying as a RVO. The RVO mentioned having an overall average training experience. They did not have any concerns but would have appreciated a better understanding of certain material. For example, during training they were taught that Metro is a right side signal system and the only left side signal was on the Red line and Brentwood Yard. They were taken to Brentwood Yard to see that signal during training. Communicating with the MICC was a challenge for the RVO because they really could not practice talking to Central during training. The RVO suggested spending more time practicing communication during training would help.

The RVO mentioned they have never been governed to get no closer than 10 feet of an interlocking signal. The RVO mentioned the Radio RTC gave them a permissive block to no closer than 10 feet of D06-08 signal. They have only been given blocks to the 8-car marker so their instructions really were not registering. The RVO was assigned to Dulles Yard on the day of the event. When they arrived at work, the Terminal Supervisor gave them an assignment to transport a gap train and finish a block on a run. The red signal overrun happened during their second round trip. The RVO did not experience any mechanical issues with the train. The RVO said they never lost speed commands when they left Potomac Avenue Station. As they departed, they mentioned the signal was lunar and they did not see a red signal until they reached Capitol South Station. They serviced Eastern Market Station with no issues, and they had to enter Stop and proceed mode to enter the platform limits at Capitol South Station.

Appendix B – Signal Engineering Investigation Report

| | | |
|---|--|---|
|  | Washington Metropolitan Area Transit Authority | |
| | INVESTIGATION REPORT | Incident Analysis Report D06-8 Red Signal overrun |

SIGNAL ENGINEERING INVESTIGATION REPORT

REQUEST NUMBER: E25463-20250420
(D06 Red signal overrun)

REQUESTER: [REDACTED]

DATE: 2025 Apr 28

BY: [REDACTED]

COSI – SIGNAL ENGINEERING

Original
Approved: 04/29/2025

INFR-COSI-ATC-IR-25-000x-D06-0.0-04292025-YR
Page 1 of 4
INFR-COSI-ATCE-IR-25-0010-D06.docx

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

Page 19



Incident Title: D06-8 Red Signal Overrun
 Incident Date/Time: 2025 Apr 20 – 22:26:44
 Incident Location: D06/Eastern Market

EXECUTIVE SUMMARY:

Interlocking worked normally prior to the incident.

The train #739, preceding the incident train, entered D06 platform 2 at 22:18:52. This train destination code was 74 (New Carrollton Yard). This train stopped at D06 platform2, reversed ends and crossed D06 interlocking from track 2 to track 1.

The next (incident) train #612, running to N12 (Ashburn, destination code 68) ran the signal 8 at RED, passed D06 (Eastern Market station), and continued toward B05 (Capitol South).

The Incident train, running on track 2, entered D06 territory at 22.24.42 - shortly after the previous train crossed from track 2 to track 1, while D06 switch 3 still was in Reverse position and signal 8 was at Red/Stop state.

At 22.26.00 the Incident train overrun signal 8 at Red/Stop state, and at 22.26.44 trailed switch 3B.

Attachments:

- Safety Oracle Request (E25463-20250420)
- D06 Book of Plans, page D06-G-7 (markup)

Original
 Approved: 04/29/2025

INFR-COSI-ATC-IR-25-000x-D06-0.0-04292025-YR
 Page 2 of 4
 INFR-COSI-ATCE-IR-25-0010-D06.docx

Incident Date: 04/20/2025 Time: 22:25 hours
 Final Report – Red Signal Overrun Rev. 1
 E25538

| |
|------------------------------------|
| Drafted By: SAFE 703 – 06/16/2025 |
| Reviewed By: SAFE 707 – 06/16/2025 |
| Approved By: SAFE 707 – 06/16/2025 |



| | | | | | | | | |
|--|---|--------------------|--|-------------------------------------|----------|--|---------|------|
| COSI-SIGNAL ENGINEERING | Washington Metropolitan Area Transit Authority | | Detailed Incident Analysis | | | | | |
| | | | Report Num: | Incident number 1998810670847050 | | | | |
| | | | Requestor: | [REDACTED] | | | | |
| | | | Date: | 2025 April 20 22:26:44 | | | | |
| | | | From: | [REDACTED] | | | | |
| To: | [REDACTED] | | | | | | | |
| Reported Data: | | | Time: | 00.20.00 to 03.50.00 | Train ID | 612 | | |
| Description: | D06/Eastern Market D06-02 Red Signal Overrun | | | Interlocking Control Central/Remote | | | | |
| Requested Analysis: Investigate Incident | | | | | | | | |
| INITIAL STATE AS OF: [22:15:00] | | | | | | | | |
| Name | STATE | AUTO | NAME | STATE | AUTO | NAME | STATE | AUTO |
| Signal D06-02 | CLEAR | NO | D2-145 | Vacant | - | 1-3T | Vacant | - |
| Switch 1A/B | NORMAL | NO | 1BT | Vacant | - | D2-141 | Vacant | - |
| Switch 3A/B | NORMAL | NO | 3BT | Vacant | - | Interlocking Control | Central | - |
| RECORDED EVENT DATA | | | | | | | | |
| TIME | LOCATION | STATUS/ CONTROL | AIMS DESCRIPTION | | | COMMENTS | | |
| 22.18.41 | D06 | STATUS | Track Circuit 1BT Occupied | | | Train #739 passed D06 interlocking and stopped at platform 2. Switch 3 thrown Reverse. Train changed ends and left the station, occupying / vacating Track Circuits D2-141, 3BT, 1-3T, 3AT, D1-145 in sequence | | |
| 22.18.42 | D06 | STATUS | Signal State D06-02 STOP | | | | | |
| 22.24.08 | D06 | STATUS | Switch Position 3 Reverse | | | | | |
| 00.20.24 ... 22.24.57 | D06 | STATUS | Track Circuits D2-141, 3BT, 1-3T, 3ATD1-145 Occupied / Vacant in sequence | | | The incident train #612 left D07 toward D06 and just reached D2-145, relatively short (around 130 ft) track circuit in front of interlocking. | | |
| ~22.23.10 ... 22.24.42 | D06 | STATUS | Track circuits D2-162/159/151/148/146 (all at B07 territory) are occupied / vacant in sequence. D2-145 (D06 territory) is just occupied. | | | | | |
| 22.26.00 | D06 | STATUS | Switch Position 3 is Reverse since 22.24.08 | | | | | |
| 22.26.00 | D06 | STATUS | Signal State D06-02 is Red/STOP since 22.18.42 | | | Train #612 crosses insulated joints at Signal 8 and proceeds through the interlocking area. Signal 8 is overrun | | |
| 22.26.00 | D06 | STATUS | Track Circuit 1BT Occupied | | | | | |
| 22.26.32 | D06 | STATUS | Track Circuit 3BT Occupied | | | | | |
| 22.26.44 | D06 | STATUS | D06 Switch Position 3 Out of Correspondence | | | Switch 3B is trailed | | |
| 22.26.45 | D06 | STATUS | Track Circuit D2-141 Occupied | | | | | |

Original
Approved: 04/29/2025

INFR-COSI-ATC-IR-25-000x-D06-0.0-04292025-YR

Page 3 of 4

INFR-COSI-ATCE-IR-25-0010-D06.docx

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025

| | | | | |
|--------------------------|-----|--------|---|---|
| 22.26.46 | D06 | STATUS | Track Circuit D2-138 Occupied, Track Circuit D2-132 pre- shunted | D06 platform 2 |
| 22:27:21 | D06 | STATUS | Train Berthed | The train stopped and opened the left door for 23 s |
| 22.27.28 ... 22.27.51 | D06 | STATUS | Track 2 Door Close Right Track 2 Door Close Both Sides | |
| ~ 22.28.15 | D06 | STATUS | Track Circuits D2-132/129/127/125 etc., occupied/vacated in sequence | The Incident train leaves D06 and stops at D05 (Capitol South). |
| | | | | |

Circuit Power Failure: Yes No Processor Failure: Yes No Power Transfer: Yes No

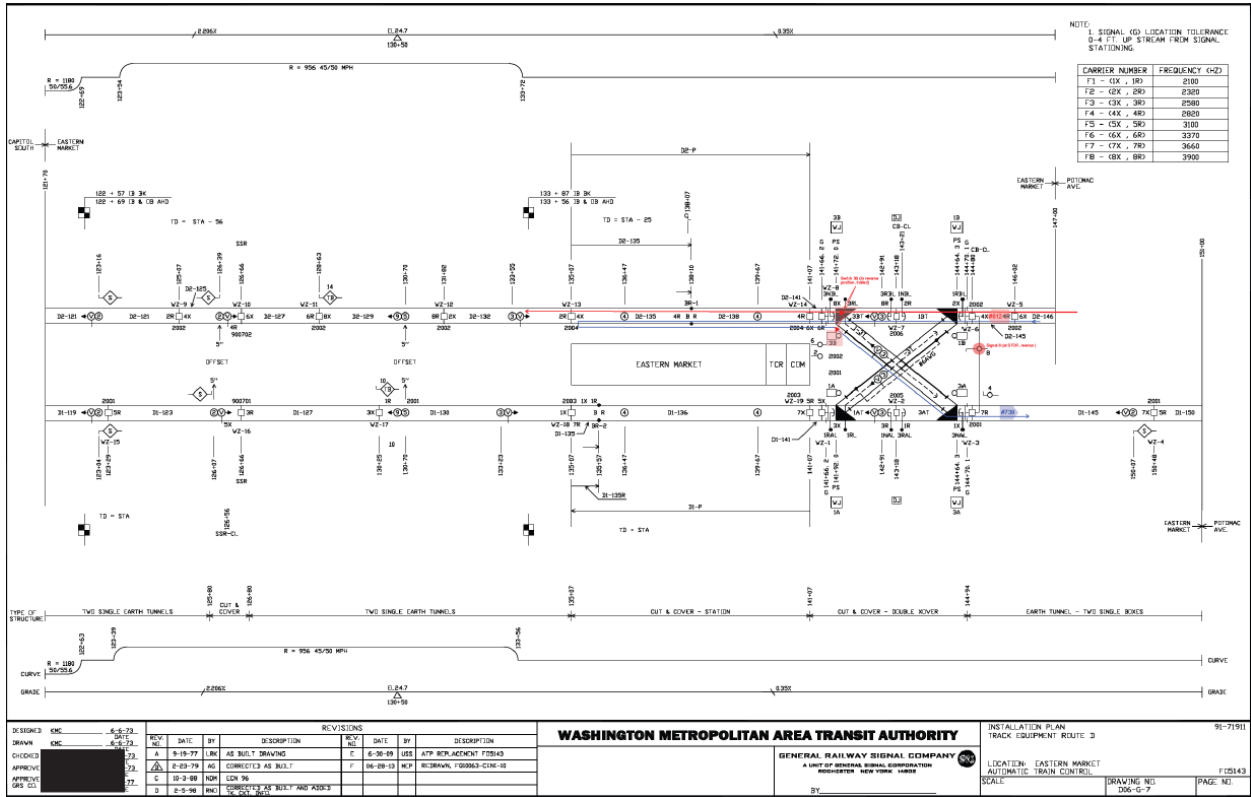
- DISTRIBUTION LIST**
- COSI Executive Leadership ([REDACTED])
 - Signal Engineering Sr Director ([REDACTED])
 - Signal Engineering Managers ([REDACTED])
 - Signal Maintenance Personnel ([REDACTED])
 - MICC Personnel ([REDACTED])
 - SAFE Personnel ([REDACTED])

Original
Approved: 04/29/2025

INFR-COSI-ATC-IR-25-000x-D06-0.0-04292025-YR
Page 4 of 4
INFR-COSI-ATCE-IR-25-0010-D06.docx

Incident Date: 04/20/2025 Time: 22:25 hours
Final Report – Red Signal Overrun Rev. 1
E25538

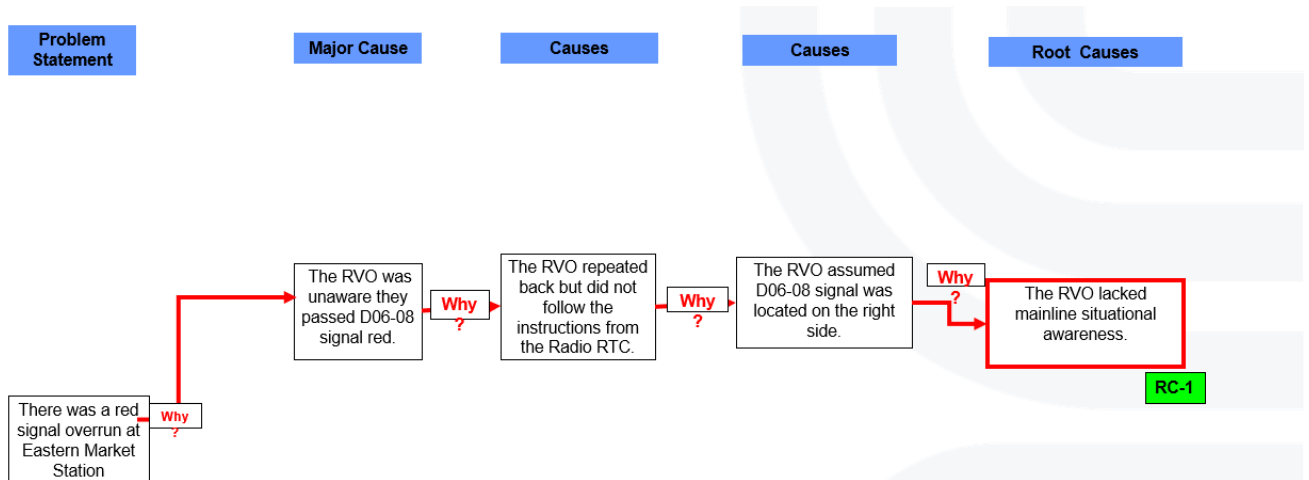
Drafted By: SAFE 703 – 06/16/2025
Reviewed By: SAFE 707 – 06/16/2025
Approved By: SAFE 707 – 06/16/2025



Incident Date: 04/20/2025 Time: 22:25 hours
 Final Report – Red Signal Overrun Rev. 1
 E25538

Drafted By: SAFE 703 – 06/16/2025
 Reviewed By: SAFE 707 – 06/16/2025
 Approved By: SAFE 707 – 06/16/2025

Appendix C – Why-Tree Analysis



Root Cause Analysis