



WMSC Commissioner Brief: W-0276 – Red Signal Overrun – L’Enfant Plaza Station – October 27, 2023

Prepared for Washington Metrorail Safety Commission meeting on May 14, 2024

Safety event summary:

A Yellow Line Train Operator (Train Operator #1) improperly moved an in-service train past a red signal at L’Enfant Plaza Station on October 27, 2023.

Prior to this red signal overrun, a different Train Operator (Train Operator #2) had taken over train operation at Ronald Reagan Washington National Airport Station without this change of operator being clearly communicated with the Rail Traffic Controller. Metrorail Train Operators identify themselves while operating a train utilizing the Train ID number. Train Operator #2 took over operations after a change in instructions from the Rail Traffic Controller to Train Operator #1 to have this train continue to U Street Station rather than turn around at National Airport due to service adjustments during needed repairs at Mt. Vernon Sq Station. Train Operator #2 was on the National Airport Station platform near the northbound end of the train at this time, and had been directed by a Rail Traffic Controller to report to U St. Station. The original Train Operator had already moved to the southbound end. Train Operator #2 entering the train moved the train northbound sooner than waiting for Train Operator #1 to return to the northbound end.

Train Operator #1 returned to the operating cab at north end of the train at L’Enfant Plaza Station, after the second Train Operator had requested and received permission from the Rail Traffic Controller to activate Stop and Proceed mode to reposition the train to the end of the platform to service the station. The train had stopped after speed commands dropped to zero as the train entered the station. The Rail Traffic Controller directed Train Operator #2 to standby after moving the train to the eight-car marker and servicing the station because signal F03-02 was red. Train Operator #2 acknowledged and repeated the communication.

After stopping at the station, Train Operator #2 keyed down (turned off the controls of) the train, and exited to the platform. Train Operator #1 keyed up (turned on the controls of) the train. The Stop and Proceed Mode Awareness Tool software that Metrorail designed to reduce the risk of unauthorized movement without speed commands did not reset when the train was keyed down or when the doors were opened to service the station. Train Operator #1 was talking to Train Operator #2 on the platform as Train Operator #1 moved the train forward past the red signal and toward Switch 3A that was in reverse position, not aligned for the intended movement. The Train Operator had moved the Master Controller to the maximum P5 Power Mode, increasing speed to 13 mph. After 59 feet, Stop and Proceed mode de-activated and automatic braking applied. The train stopped 181 feet later. Three cars of the eight-car train were beyond the station platform. The Rail Traffic Controllers observed a red signal overrun alarm and contacted the Train Operator, who confirmed the train had passed the signal. Metrorail suspended Yellow and Green Line rail service in the area for the inspection of any damage and investigation of the event.

The inspection determined that the train had stopped prior to the switch, and did not cause any damage. Metrorail’s maintenance response was delayed in part due to a shift change occurring around the time of this event. Personnel clamped the interlocking in a normal position, then resumed service.

This was Train Operator #1’s first week as a Train Operator and their first day operating a train alone. They had passed their train operator certification on their second attempt one week prior to the event. The areas requiring retesting on



the second certification practical exam attempt did not relate to this event. Regarding this event, the Train Operator acknowledged the mistake of not paying attention to the signal and rail alignment in the investigative interview.

Probable Cause:

The probable cause of this event was Metrorail's inadequate procedures related to transfer of control of train operation. Contributing to this event were design failures in Metrorail's Stop and Proceed software, and Metrorail's culture of non-compliance with rules, procedures, and instructions.

Corrective Actions:

Metrorail provided additional training to Train Operator #1.

Metrorail distributed red signal overrun lessons learned to train operators.

Examples of other related open CAPs

- CAP C-0181 addressing the finding that elements of Metrorail have a culture that accepts noncompliance with written operational rules, instructions, and manuals. (Expected completion date October 2024). Metrorail has revised its Safety Management System related to Rail Operations. This has included implementing new methods of hazard and risk reporting, training of personnel on reporting and implementation of a new data collection system for those issues so they can be properly evaluated and addressed. The WMSC is currently reviewing this CAP to ensure the deliverables meet the intended actions of the CAP.
- CAP C-0183 addresses a finding that Metrorail creates safety risks by not requiring and 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. (Current scheduled completion September 2025). Metrorail has created physical characteristics training materials and is in the process of rolling out a pilot program to test the efficiency of the materials prior to rolling out organization wide.
- Train Operator Certification CAPs in development.

WMSC staff observations:

The WMSC is raising to Metrorail the opportunity for WMATA to improve mode awareness tool design for the 8000 Series Railcars.

Metrorail could consider adjusting its radio protocols regarding train operator identification.



Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23766

Date of Event:	October 27, 2023
Type of Event:	Red Signal Overrun
Incident Time:	14:17 Hours
Location:	L'Enfant Plaza Station, track 1 – Signal F03-02
Time and How received by SAFE:	14:21 Hours – SAFE/MAC
WMSC Notification Time:	15:02 Hours
Responding Safety Officers:	WMATA: Office of Safety Investigations (OSI) WMSC: N/A Other: N/A
Rail Vehicle:	Train ID 309 L7450-7451, 7695-7694, 7738-7739, 7603-7602T
Injuries:	None
Damage:	None
Emergency Responders:	Emergency Response Team (ERT)
SMS I/A Incident Number:	20231027#112409MX

L'Enfant Plaza, track 1 (Signal F03-02) – Red Signal Overrun

October 27, 2023

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Abbreviations and Acronyms

AIMS	Advanced Information Management System
AOM	Assistant Operations Manager
ARS	Audio Recording System
ATC	Automatic Train Control
BOCC	Bus Operations Communications Center
CCTV	Closed-Circuit Television
CMOR	Office of Chief Mechanical Officer
ERT	Emergency Response Team
IIT	Incident Investigation Team
IJ	Insulator Joint
MAC	Mission Assurance Coordinator
MICC	Metro Integrated Command & Communications Center
MOC	Maintenance Operation Center
MOR	Metrorail Operating Rulebook
NOAA	National Oceanic and Atmospheric Administration
OM	Operations Manager
OSI	Office of Safety Investigations
ROIC	Rail Operations Information Center
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
SAFE	Department of Safety
SMS	Safety Measurement System
SPOTS	System Performance On-Time Summary
VDMS	Vehicle Monitoring and Diagnostic System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

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

Executive Summary

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

On Friday, October 27, 2023, at 14:17 hours, the Train Operator of Train ID 309, a Yellow Line, eight car 7000 series consist, operated the train past signal F03-02, displaying a red aspect.

Before the event, at 14:15 hours, the Train Operator contacted the Metro Integrated Command & Communications Center (MICC) Radio Rail Traffic Controller (RTC) and requested a permissive block to the 8-car marker at L'Enfant Plaza Station on track 1. The Radio RTC granted a permissive block and instructed the Train Operator to service the station and to standby, then advised that signal F03-02 was red. The Train Operator acknowledged this by repeating the instructions.

The Advanced Information Management System (AIMS) signaled that Train ID 309 passed signal F03-02 red at 14:17 hours.

At 14:18 hours, the Radio RTC contacted the Train Operator and inquired if the train was still berthed on the platform at L'Enfant Plaza Station. The Train Operator responded that the train had passed the red signal.

The Radio RTC instructed the Train Operator to reverse ends, verify that cars were still on the platform, and offload the train by keying off the customers.

The Button RTC notified the Assistant Operations Manager (AOM), the Rail Operations Information Center (ROIC), and the Maintenance Control Center (MOC) of the red signal overrun. The AOM notified the Operations Manager (OM) of the event. The OM contacted the Bus Operations Communications Center (BOCC) and requested shuttle bus services.

At 14:29 hours, rail service to Yellow and Green Lines at L'Enfant Plaza Station was suspended. The Office of Safety Investigations (OSI), the Emergency Response Team (ERT), and the Office of Automatic Train Control (ATC) were notified of the event and dispatched personnel to L'Enfant Plaza Station.

At 14:33 hours, the Director of OSI and an Office of Rail Transportation (RTRA) Rail Supervisor arrived at L'Enfant Plaza Station.

At 15:01 hours, the Rail Supervisor was granted permission to enter the roadway on track 1 to perform an inspection.

At 15:04 hours, ERT arrived at L'Enfant Plaza Station. The Rail Supervisor was assigned the role of Incident Commander. At 15:12 hours, the Incident Commander reported that the train was stopped before switch 3A.

At 15:20 hours, ATC arrived at L'Enfant Plaza Station. ERT and ATC entered the roadway, performed an inspection, and requested that the train be moved back to L'Enfant Plaza Station.

The Incident Commander advised that Rail Supervisor #2 was in place to move the train.

At 15:46 hours, the Radio RTC granted an absolute block to the 8-car marker at L'Enfant Plaza Station. At 15:49 hours, Train ID 309 stopped on the platform at L'Enfant Plaza Station. At 15:56 hours, Train ID 309 (709) continued to Branch Avenue Yard.

At 15:57 hours, ERT requested and was granted permission to clamp the entire interlocking at L'Enfant Plaza Station. At 16:04 hours, ATC confirmed that switches 1A/3A and 1B/3B were clamped in a normal position and advised that the tracks were safe for train movement.

At 16:05 hours, the Incident Commander advised that all personnel and equipment were clear from the roadway on tracks 1 and 2.

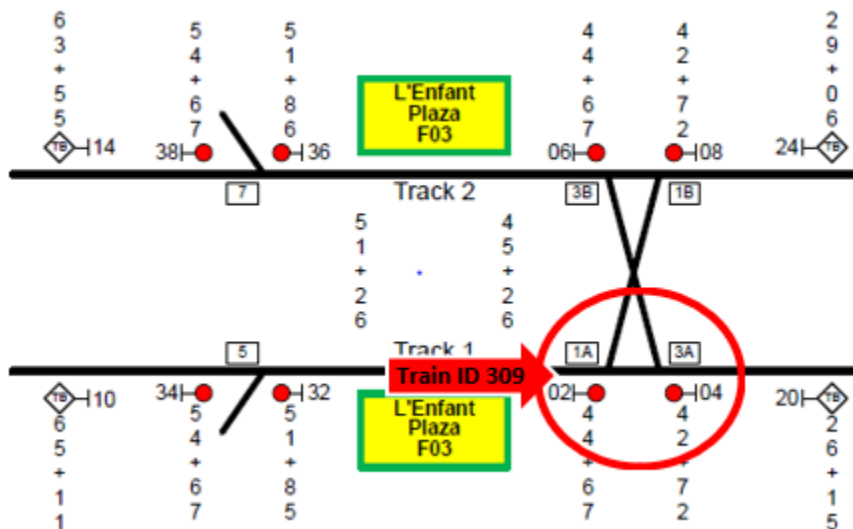
At 16:12 hours, the Radio RTC announced that normal service resumed at L'Enfant Plaza Station. RTRA removed the Train Operator from service for post-incident testing. Train ID 309 was removed from service for post-incident inspection.

The probable cause of the Red Signal Overrun event on October 27, 2023, at L'Enfant Plaza Station, identifies the failure of the Train Operator to adhere to procedures, including verifying speed commands and lunar signals, leading to the red signal overrun. Contributing factors include a human factors failure of complacency, and an inadequate safeguard with the Stop and Proceed software. Additionally, Train Operator #2, who received instructions from MICC, was not in control when the stand-by order was given at L'Enfant Plaza Station due to the red signal at F03-02.

Incident Site

L'Enfant Plaza, track 1 – Signal F03-02

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:

- Site Assessment through document review

- Formal Interviews – SAFE 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). SAFE interviewed the following individual:
 - Train Operator – Train ID 309
 - Radio RTC

- 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 – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
 - Train Operator Training Records
 - Train Operator Certifications
 - Train Operator 30-Day work history review
 - Metrorail Operating Rulebook (MOR)
 - National Oceanic and Atmospheric Administration (NOAA)
 - Metro Integrated Command & Communications (MICC) Rail Incident Report
 - Maximo Data
 - Oracle Report

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
 - Audio Recording System (ARS) playback
 - Advanced Information Management System (AIMS)
 - Closed-Circuit Television (CCTV)
 - The Office of Chief Mechanical Officer (CMOR), Incident Investigation Team (IIT)
 - Vehicle Monitoring and Diagnostic System (VMDS)
 - System Performance On-Time Summary (SPOTS)

Investigation

On Friday, October 27, 2023, at 13:12 hours, ERT requested and was granted permission to perform interlocking repairs at Mt. Vernon Square Station, 3B Switch Insulator Joint (IJ) on track 2. Trains began single tracking at Mt. Vernon Square Station.

The Audio Recording System (ARS) revealed that at 13:15 hours, the Radio RTC announced that the Yellow Line trains would continue to U Street Station to offload, and at 13:23 hours, announced that every other Yellow Line train would enter the pocket track at National Airport Station offload and reverse ends.

At 13:40 hours, the Train Operator of Train ID 309 contacted the MICC and reported that the train was departing Huntington Station. The operator inquired about the train's destination: National Airport Station or U Street Station. The Radio RTC responded to the National Airport Station.

At 13:43 hours, the Radio RTC instructed the Rail Supervisor located at Eisenhower Avenue Station to report to National Airport Station to assist with turning the trains. Train Operator #2 reported they were located at National Airport Station and advised they would assist until the Rail Supervisor arrived. The Radio RTC instructed Train Operator #2 to report to U Street Station.

At 13:46 hours, Train ID 308 arrived at National Airport Station on track 3, ahead of Train ID 309.

At 13:52 hours, Train ID 309 reported losing speed commands on approach to National Airport Station on track 1; the Radio RTC instructed Train ID 309 to stand by for a lunar into the pocket track.

At 13:53 hours, Train ID 308 departed National Airport Station towards Huntington Station.

At 13:55 hours, the Closed-Circuit Television (CCTV) revealed that Train ID 309 arrived at the National Airport Station on track 1. The train was offloaded, and then the Train Operator reversed ends.

At 14:01 hours, the Radio RTC instructed Train ID 309 to continue towards Crystal City Station. The Train Operator replied that they were awaiting instructions. The Radio RTC inquired if the Train Operator was located on the Mt. Vernon Square Station end of the train; the Train Operator replied no and advised that the RTC said that the train would turn around at National Airport Station. The Radio RTC instructed the Train Operator to key up the train on the Mt. Vernon Square Station end.

At 14:02 hours, Train Operator #2 reported they were at the National Airport Station and would provide assistance. CCTV revealed that Train Operator #2 keyed open the train door on car 7450, boarded the train, entered the cab area, and opened the train doors. Customers boarded the train, and the train departed the platform.

At 14:10 hours, Train Operator #2 contacted the MICC, then reported as Train ID 309, and advised that the train had lost speed commands on approaching Pentagon Station on track 1. The Radio RTC granted a permissive block to the 8-car marker and then inquired to verify the train's destination. Train Operator #2 replied to Mt. Vernon Square Station and requested an update be sent to the train.

At 14:15 hours, Train Operator #2 contacted the MICC, reported as Train ID 309, and requested a permissive block to the 8-car marker at L'Enfant Plaza Station on track 1. The Radio RTC granted a permissive block, instructed to service the station, and standby since signal F03-02 was red. Train Operator #2 acknowledged and repeated the instructions.

At 14:16 hours, Train ID 309 stopped at the 8-car marker at L'Enfant Plaza Station. The Office of the Chief Mechanical Officer, Incident Investigation Team (CMOR/IIT) analysis revealed that at 14:17 hours, Train ID 309 was keyed down. Seconds later, the train was keyed up.

CCTV revealed that Train Operator #2 exited the train onto the platform. At 14:17 hours, the Train Operator was talking to Train Operator #2 as the train departed L'Enfant Plaza Station, then passed F03-02, displaying a red aspect. The train stopped with five cars remaining on the platform.



Image 1 - Train ID 309's forward-facing camera shows the train passing the F03-02 signal with a red aspect.

AIMS Playback revealed that at 14:17 hours, Train ID 309 passed signal F03-02, displaying a red aspect.

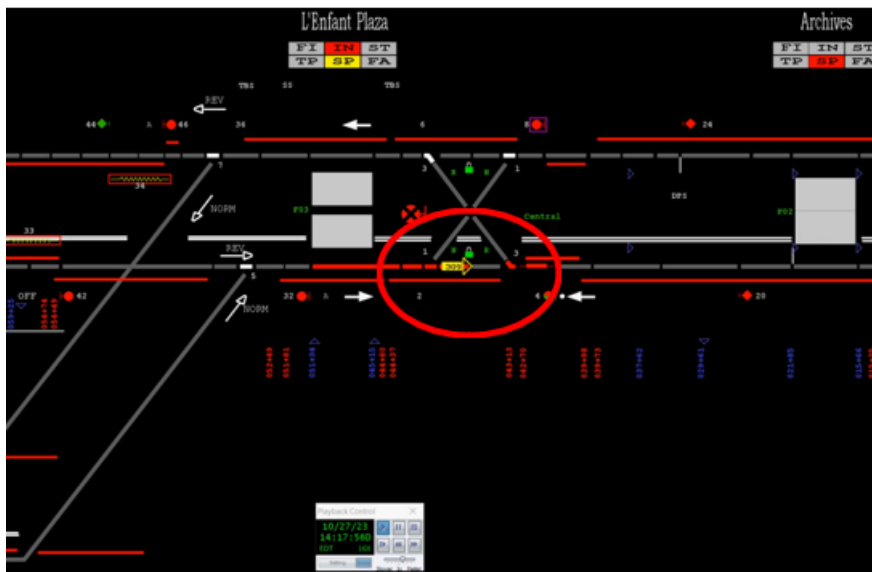


Figure 1 - AIMS Playback of Train ID 309 overrunning F03-02 signal red at L'Enfant Plaza Station at 14:17 hours.

At 14:18 hours, the Radio RTC contacted the Train Operator and inquired if the train was still berthed on the platform at L'Enfant Plaza Station. The Train Operator responded, "Negative. The train passed the red signal."

At 14:18 hours, the Button RTC notified the AOM of the event.

The Radio RTC instructed Train ID 505, located at Archives Station on track 1, to hold.

At 14:19 hours, the AOM notified the OM of the event. The Button RTC notified ROIC and MOC of the event. MOC contacted ATC and requested personnel to respond to L'Enfant Plaza Station.

The Radio RTC instructed the Train Operator to reverse ends, verify that cars were still on the platform, and offload the train by keying off the customers. Train Operator #2 was on the platform and reported that two cars were in the tunnel.

At 14:21 hours, the Radio RTC instructed Train ID 303 approaching L'Enfant Plaza Station on track 1 to stop and reverse ends. At 14:23 hours, the Radio RTC instructed Train ID 306, located at Mt. Vernon Square Station on track 2, to reverse ends.

At 14:25 hours, the OM contacted BOCC and requested shuttle bus services. The ROIC Controller instructed the Station Manager at L'Enfant Plaza to report to the platform and assist with offloading the train.

At 14:29 hours, the OM instructed the AOM to suspend service at L'Enfant Plaza Station. The Mission Assurance Coordinator (MAC) contacted and notified the WMSC of the event.

At 14:31 hours, the ROIC Controller instructed the Station Manager at L'Enfant Plaza to clear the customers from the platform on the yellow and green lines.

At 14:33 hours, the Radio RTC granted an absolute block to Train ID 303 to Pentagon Station on track 1. The Director of OSI and a Rail Supervisor arrived at L'Enfant Plaza Station.

At 14:39 hours, the Train Operator reported that Train ID 309 was clear of customers.

At 14:43 hours, the MAC updated the WMSC and received an event scene release.

At 14:51 hours, ERT reported that the repairs at Mt. Vernon Square Station interlocking were complete and en route to L'Enfant Plaza Station.

At 15:01 hours, the Rail Supervisor was granted permission to enter the roadway on track 1 to perform an inspection.

At 15:01 hours, the Radio RTC granted foul time to Rail Supervisor #1 to enter the roadway on track 1 to perform an inspection.

At 15:04 hours, ERT arrived at L'Enfant Plaza Station. At 15:05 hours, Rail Supervisor #1 upraised the role of Incident Commander. At 15:06 hours, ERT requested and was granted permission to enter the roadway on track 1.

At 15:12 hours, the Incident Commander reported that the train was stopped before switch 3A. At 15:19 hours, ERT requested and was granted foul time on track 2 to walk back and inspect switches.

At 15:20 hours, ATC arrived at L'Enfant Plaza Station and checked in with the Incident Commander. At 15:31 hours, the Incident Commander advised that ERT and ATC were clear, and no personnel were on the roadway. Then, the Commander requested that the train be moved back to L'Enfant Plaza Station. At 15:36 hours, the Incident Commander advised that Rail Supervisor #2 was in place to move the train.

At 15:42 hours, a second ATC Mechanic requested and was granted permission to enter the roadway to conduct an inspection. At 15:44 hours, the ATC Mechanic reported that switch 3A was in reverse, the front truck did not cross the switch point, advised that their inspection was complete, and confirmed that the train could move back to L'Enfant Plaza Station.

At 15:46 hours, the Radio RTC granted an absolute block to the 8-car marker at L'Enfant Plaza Station, instructed to operate no greater than 3MPH, and advised personnel on the roadway to stand clear for train movement. At 15:47 hours, the Incident Commander advised that personnel stood by for train movement. The Radio RTC instructed Rail Supervisor #2 to move the train under an absolute block to the 8-car marker at L'Enfant Plaza Station, instructed to operate no greater than 3MPH, and advised signal F03-32 was red. At 15:49 hours, Train ID 309 stopped on the platform at L'Enfant Plaza Station.

At 15:56 hours, the Radio RTC instructed Rail Supervisor #2 to reblock the Train ID to 709 and then granted a permissive block to the Waterfront Station. At 15:57 hours, the Incident Commander reported that Train ID 709 was clear of L'Enfant Plaza Station and to continue to Branch Avenue Yard.

At 15:57 hours, ERT requested and was granted permission to clamp the entire interlocking at L'Enfant Plaza Station. At 16:02 hours, ERT reported that switches 1A/3A and 1B/3B were clamped in a normal position. At 16:04 hours, ATC confirmed that switches 1A/3A and 1B/3B were clamped in a normal position and advised that they would remain located at L'Enfant Plaza Station.

At 16:05 hours, the Incident Commander advised that all personnel and equipment were clear from the roadway on tracks 1 and 2. At 16:07 hours, ATC advised that the tracks were safe for train movement.

At 16:11 hours, Train ID 522 arrived at L'Enfant Plaza Station on track 2 in service.

At 16:12 hours, the Radio RTC announced that normal service resumed at L'Enfant Plaza Station.

At 16:13 hours, Train ID 502 arrived at L'Enfant Plaza Station on track 2 in service.

At 16:24 hours, Train ID 709 arrived at Branch Avenue Yard and was secured on track 15.

Chronological Event Timeline

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

Time	Description
13:12:20 hours	<u>ERT</u> : Requested to make repairs at Mt. Vernon Square Station interlocking. [Radio Ops 3]
13:15:36 hours	<u>MICC Radio RTC</u> : Announced that Yellow Line trains would continue to U Street Station to offload. [Radio Ops 3]
13:23:31 hours	<u>MICC Radio RTC</u> : Announced that every other Yellow Line train would enter the pocket track at National Airport Station offload and reverse ends. [Radio Ops 3]
13:40:34 hours	<u>Train ID 309</u> : Reported departing Huntington Station and inquired if the destination was National Airport Station or U Street Station. <u>MICC Radio RTC</u> : Responded National Airport Station. <u>Train ID 309</u> : Acknowledged and repeated. [Radio Ops 3]
13:43:38 hours	<u>MICC Radio RTC</u> : Instructed the Rail Supervisor at Eisenhower Avenue Station to report to the National Airport Station. <u>Rail Supervisor</u> : Acknowledged. [Radio Ops 3]
13:43:50 hours	<u>Train Operator #2</u> : Reported located at National Airport Station. Advised they would assist until the Rail Supervisor arrived. <u>MICC Radio RTC</u> : Instructed to report to U Street Station.

Time	Description
	<u>Train Operator #2</u> : Acknowledged. [Radio Ops 3]
13:46:34 hours	Train ID 308 arrived at National Airport Station on track 3. [SPOTS]
13:52:47 hours	<u>Train ID 309</u> : Reporting losing speed commands on approaching National Airport Station on track 1. <u>MICC Radio RTC</u> : Instructed to stand by for a lunar into the pocket track. <u>Train ID 309</u> : Acknowledged and repeated. [Radio Ops 3]
13:53:38 hours	Train ID 308 departed National Airport Station on track 3. [SPOTS]
13:55:30 hours	Train ID 309 arrived at National Airport Station on track 1. The train was offloaded, and then the Train Operator reversed ends. [CCTV]
14:01:29 hours	<u>MICC Radio RTC</u> : Instructed to continue to Crystal City. <u>Train ID 309</u> : Responded, "Waiting for instructions." <u>MICC Radio RTC</u> : Inquired if the Train Operator was in the cab heading to Mt. Vernon Square Station. <u>Train ID 309</u> : Responded, no. You told me to turn around at the airport. <u>MICC Radio RTC</u> : Instructed to key up on the Mt. Vernon Square Station end. <u>Train ID 309</u> : Acknowledged. [Radio Ops 3]
14:02:11 hours	<u>Train Operator #2</u> : Reported located at National Airport Station. (Inaudible). [Radio Ops 3]
14:03:10 hours	<u>Train Operator #2</u> keyed open the train door on car 7450, boarded the train, entered the cab area, and opened the train doors. Customers boarded the train, and the train departed the platform. [CCTV]
14:10:40 hours	<u>Train Operator #2</u> : Reported as Train ID 309 and advised that the train had lost speed commands approaching Pentagon Station on track 1. <u>MICC Radio RTC</u> : Granted a permissive block to the 8-car marker. Inquired to verify the train's destination. <u>Train Operator #2</u> : Responded, Mt. Vernon Square Station. Requested to send an update to the train. [Radio Ops 3]
14:15:53 hours	<u>Train Operator #2</u> : Reported as Train ID 309 and requested a permissive block to the 8-car marker at L'Enfant Plaza Station on track 1. <u>MICC Radio RTC</u> : Granted a permissive block and instructed to service and standby signal F03-02 was red. <u>Train Operator #2</u> : Acknowledged and repeated. [Radio Ops 3]
14:16:50 hours	Train ID 309 stopped at the 8-car marker at L'Enfant Plaza Station. [CCTV]
14:17:04 hours	Train ID 309 was keyed down. [CMOR Report]
14:17:13 hours	Train ID 309 was keyed up. [CMOR Report]
14:17:17 hours	<u>Train Operator #2</u> exited the train. [CCTV]
14:17:45 hours	The train operator was talking to train operator #2 as the train departed from L'Enfant Plaza Station. [CCTV]
14:17:56 hours	Train ID 309 passed signal F03-02 red. [AIMS]
14:18:02 hours	Train ID 309 stopped with five cars remaining on the platform. [CCTV]
14:18:16 hours	<u>MICC Radio RTC</u> : Inquired if the train was properly berthed at L'Enfant Plaza Station. <u>Train ID 309</u> : Responded, negative. The train passed the red signal. [Radio Ops 3]
14:18:46 hours	<u>MICC Button RTC</u> : Notified the AOM. [Phone Yel/Grn]
14:19:07 hours	<u>MICC Radio RTC</u> : Instructed Train ID 505 located at Archives Station on track 1 to hold. <u>Train ID 505</u> : Acknowledged and repeated. [Radio Ops 3]

Time	Description
14:19:12 hours	<u>AOM</u> : Notified the OM. [Phone Rail 3]
14:19:21 hours	<u>MICC Button RTC</u> : Notified the ROIC. [Phone Yel/Grn]
14:19:26 hours	<u>MICC Button RTC</u> : Notified MOC. [Phone Yel/Grn]
14:19:25 hours	<u>MOC</u> : Notified ATC and requested personnel to respond to L'Enfant Plaza Station. [Phone MOC ATC]
14:19:53 hours	<u>MICC Radio RTC</u> : Instructed to reverse ends and check for any cars on the platform. <u>Train Operator #2</u> : Reported two cars in the tunnel. [Radio Ops 3]
14:21:54 hours	<u>MICC Radio RTC</u> : Instructed Train ID 303, located in approach to L'Enfant Plaza Station on track 1, to stop and reverse ends. <u>Train ID 303</u> : Acknowledged and repeated. [Radio Ops 3]
14:23:36 hours	<u>MICC Radio RTC</u> : Instructed Train ID 306 at Mt. Vernon Square Station on track 2 to reverse ends. <u>Train ID 306</u> : Acknowledged and repeated. [Radio Ops 3]
14:25:03 hours	<u>OM</u> : Requested shuttle bus service. [Phone Metro 1]
14:25:06 hours	<u>ROIC Controller</u> : Instructed the Station Manager at L'Enfant Plaza to report to the platform and assist with offloading the train. [Phone ROIC 2]
14:29:11 hours	<u>OM</u> : Instructed to suspend service at L'Enfant Plaza Station. [Phone Metro 1]
14:29:42 hours	<u>MAC</u> : Notified the WMSC. [Phone MAC]
14:31:23 hours	<u>MICC Radio RTC</u> : Instructed the Train Operator to key customers off the train. <u>Train ID 309</u> : Acknowledged. [Radio Ops 3]
14:31:35 hours	<u>ROIC Controller</u> : Instructed the Station Manager at L'Enfant Plaza to clear the customers from the platform on the yellow and green lines. [Radio Ops 5]
14:33:05 hours	<u>MICC Radio RTC</u> : Granted an absolute block to Pentagon Station on track 1. <u>Train ID 303</u> : Acknowledged and repeated. [Radio Ops 3]
14:33:09 hours	<u>Rail Supervisor #1</u> : Reported located at L'Enfant Plaza Station. [Phone Yel/Grn]
14:33:31 hours	OSI reported being located at L'Enfant Plaza Station. [Phone MAC]
14:39:38 hours	<u>Train ID 309</u> : Reported the train was clear of customers. <u>MICC Radio RTC</u> : Instructed not to move the train. <u>Train ID 309</u> : Acknowledged and repeated. [Radio Ops 3]
14:43:33 hours	WMSC provided an event scene release. [Phone MAC]
14:51:35 hours	<u>ERT</u> : Advised work was complete and was en route to L'Enfant Plaza Station. [Phone Yel/Grn]
15:01:25 hours	<u>MICC Radio RTC</u> : Granted foul time to Rail Supervisor #1 to enter the roadway on track 1 to perform an inspection. <u>Rail Supervisor #1</u> : Acknowledged and repeated. [Radio Ops 3]
15:04:16 hours	<u>ERT</u> : Reported located at L'Enfant Plaza Station. <u>MICC Radio RTC</u> : Acknowledged. [Radio Ops 3]
15:05:46 hours	<u>MICC Radio RTC</u> : Informed Rail Supervisor #1 that they were the Incident Commander. <u>Rail Supervisor #1</u> : Acknowledged. [Radio Ops 3]
15:06:23 hours	<u>ERT</u> : Requested permission to enter the roadway at L'Enfant Plaza on track 1. <u>Incident Commander</u> : Granted permission advised currently under foul time. [Radio Ops 3]

Time	Description
15:12:20 hours	<u>Incident Commander</u> : Reported the train was stopped in front of the 3A switch. [Phone Metro 1]
15:19:57 hours	<u>ERT</u> : Requested foul time on track 2 to inspect switches. <u>MICC Radio RTC</u> : Granted foul time. [Radio Ops 3]
15:20:08 hours	<u>ATC</u> : Advised located at L'Enfant Plaza Station. [Phone Yel/Grn]
15:31:34 hours	<u>Incident Commander</u> : ERT and ATC were clear, and no personnel were on the roadway. Requested to move the train back to L'Enfant Plaza Station to check for damage. <u>MICC Radio RTC</u> : Advised personnel would have to walk back to the platform with the train. [Radio Ops 3]
15:36:01 hours	<u>Incident Commander</u> : Advised that Rail Supervisor #2 was in place to move the train. <u>MICC Radio RTC</u> : Acknowledged. [Radio Ops 3]
15:42:18 hours	<u>ATC</u> : Requested permission to enter the roadway. <u>MICC Radio RTC</u> : Granted permission. [Radio Ops 3]
15:44:55 hours	<u>ATC</u> : Reported that switch 3A was in reverse, and the front truck was in front of the switch point. Advised that their inspection was complete, and the train could move back to L'Enfant Plaza Station. <u>MICC Radio RTC</u> : Acknowledged. [Radio Ops 3]
15:46:04 hours	<u>MICC Radio RTC</u> : Granted an absolute block to the 8-car marker at L'Enfant Plaza Station. Instructed to operate no greater than 3MPH and advised personnel on the roadway to stand clear for train movement. <u>Supervisor #2</u> : Acknowledged and repeated. [Radio Ops 3]
15:47:13 hours	<u>Incident Commander</u> : Advised that personnel were standing by for train movement. <u>MICC Radio RTC</u> : Acknowledged. [Radio Ops 3]
15:47:29 hours	<u>MICC Radio RTC</u> : Instructed to move the train under an absolute block to the 8-car marker at L'Enfant Plaza Station. Instructed to operate no greater than 3MPH and advised signal F03-32 red. <u>Supervisor #2</u> : Acknowledged and repeated. [Radio Ops 3]
15:49:14 hours	Train ID 309 arrived on the platform at L'Enfant Plaza. [CCTV]
15:56:22 hours	<u>MICC Radio RTC</u> : Instructed to reblock the Train ID to 709. Granted a permissive block to Waterfront Station. <u>Train ID 709</u> : Acknowledged and repeated. [Radio Ops 3]
15:57:46 hours	Train ID 709 departed L'Enfant Plaza Station. [SPOTS]
15:57:57 hours	<u>Incident Commander</u> : Reported that Train ID 709 was clear of L'Enfant Plaza Station and to continue to Branch Avenue Yard. <u>MICC Radio RTC</u> : Acknowledged. [Radio Ops 3]
15:57:09 hours	<u>ERT</u> : Requested permission to clamp the entire interlocking at L'Enfant Plaza Station. <u>MICC Radio RTC</u> : Granted permission. [Radio Ops 3]
16:02:44 hours	<u>ERT</u> : Reported that switches 1A/3A and 1B/3B were clamped in a normal position. <u>MICC Radio RTC</u> : Acknowledged and repeated. [Radio Ops 3]
16:04:58 hours	<u>ATC</u> : Confirmed that switches 1A/3A and 1B/3B were clamped in a normal position and advised that they would remain located at L'Enfant Plaza Station. <u>MICC Radio RTC</u> : Acknowledged and repeated. [Radio Ops 3]
16:05:54 hours	<u>Incident Commander</u> : Advised that all personnel and equipment were clear from the roadway on tracks 1 and 2. <u>MICC Radio RTC</u> : Acknowledged. [Radio Ops 3]

Time	Description
16:07:11 hours	ATC: Advised that tracks were safe for train movement. MICC Radio RTC: Acknowledged and repeated. [Radio Ops 3]
16:11:11 hours	Train ID 522 arrived at L'Enfant Plaza Station on track 2. [SPOTS]
16:12:39 hours	MICC Radio RTC: Announced normal service resumed at L'Enfant Plaza Station. [Radio Ops 3]
16:13:19 hours	Train ID 502 arrived at L'Enfant Plaza Station on track 1. [SPOTS]
16:24:45 hours	Train ID 709 arrived at Branch Avenue Yard and secured on track 15. [Radio BA YD2]

Note: Times above may vary from other systems' timelines based on clock settings.

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

Adopted from CMOR IIT report with minor formatting and grammatical edits:

Train ID 309, Cars L7450-7451, 7695-7694, 7738-7739, 7603-7602T, were reported for a Red Signal Overrun at L'Enfant Plaza Station at F03-02 Signal.

IIT has completed the download and analysis of data and NVR video from the consist in question.

Based on VMDS and ER data, Train ID 309's ATP Speed limit dropped to 0 MPH, and a Full-Service Brake was applied 228 feet onto the L'Enfant Plaza Station platform. Stop and Proceed was initiated, and the train continued to the 8-car Marker and serviced the station, opening passenger doors on the Right Side.

After servicing the station, the train was keyed down and back up. The doors were closed, the Master Controller was placed in a P5 Power Mode, and the train began to move towards the Archives Station.

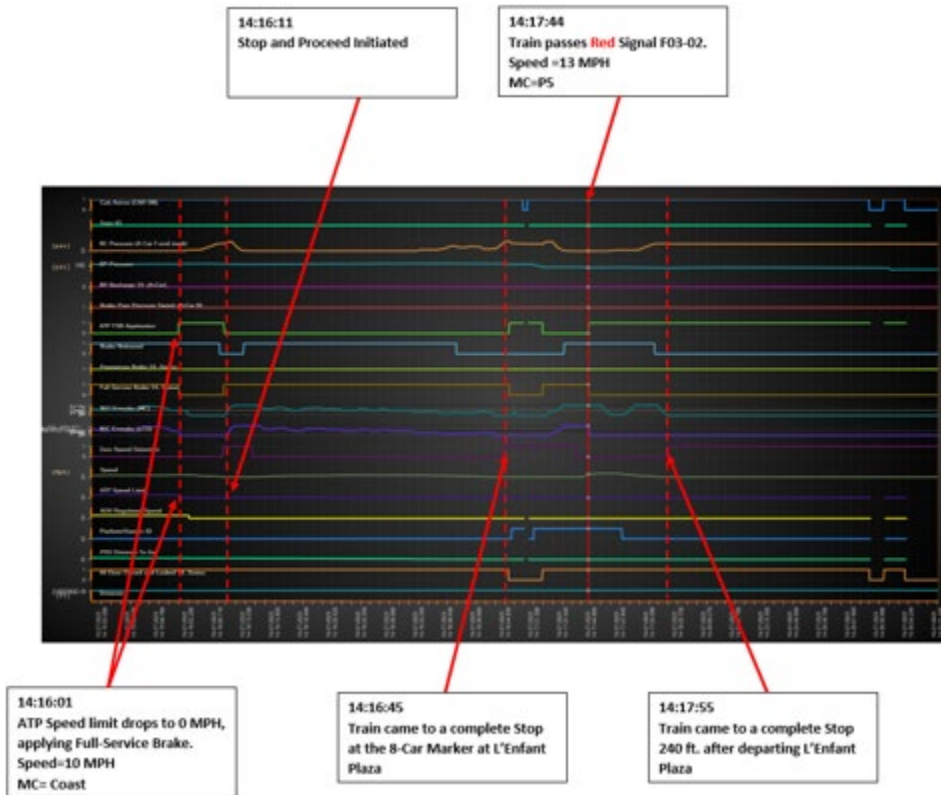
The train passed Red Signal F03-02 at a speed of 13 MPH, with the Master Controller in the P5 Power position, 59 feet after departing L'Enfant Plaza Station. Stop and Proceed de-activated, and Full-Service Brake applied B4 Braking Rate. The train came to a complete stop 240 feet after the 8-car Marker at L'Enfant Plaza Station.

Based on VMDS data, no fault with the train contributed to the cause of this incident. The train performed as designed.

Time	Description of Events
14:16:01.320	Train's ATP Speed Limit drops from 15 MPH to 0 MPH, resulting in an overspeed condition and Applying Full-Service Brake, train speed was 10 MPH at that time, 228 ft. onto L'Enfant Plaza Platform.
14:16:08.440	Train ID309 comes to a complete stop 322 ft. before the 8-Car Marker, with Full Service Brake still activated.
14:16:11.040	Stop and Proceed is initiated
14:16:11.800	Master Controller placed in the P1-P4 Power Mode and Train continues to 8-Car Marker under Stop and Proceed.
14:16:45.510	Train ID309 came to a complete stop at L'Enfant Plaza Station's 8-Car Marker, Yel/Grn, Track #1.
14:16:47.520	Right Door Open Pushbutton activated and Right Doors Open.
14:17:04.510	Car 7540 Keyed Down
14:17:13.530	Car 7540 Keyed back up
14:17:27.280	Right Door Close Pushbutton activated, Closing Right Doors.
14:17:37.440	Master Controller placed in the P5 Power position and train begins to move towards Archives.
14:17:44.010	Train passes F03-02 Signal(RED) at a speed of 13MPH, with the Master Controller in the P5 Power position. 59 ft. after departing L'Enfant Plaza.
14:17:44.810	Stop and Proceed De-activates and Full-Service Brake Applies B4 Brake Rate. 77 ft. after departing L'Enfant Plaza.
14:17:55.660	Train comes to a complete stop 240 ft. after departing L'Enfant Plaza.
14:29:08.190	Lead Car 7450 Keyed Down
14:29:48.530	Lead Car 7450 Keyed Up
14:30:50.250	Lead Car 7450 Keyed Down

Table 1 - Timeline of the event.

Note: Times above may vary from other systems' timelines based on clock settings.



Graph 1 - ER Graph

Office of Systems Maintenance, Office of Radio Communications (COMR)

COMR performed radio testing at L'Enfant Plaza Station on tracks 1 and 2. The results were loud and clear; no problems were found.

Automatic Train Control (ATC)

Adopted from ATC report:

Switch 1(a) and 3(a), and Signal 2 were operating properly and facilitated train movement over/through them prior to incident. At 14.06.24, a reverse route was called and Switch 3 was placed in the reverse (Crossover) position. Signal 2 would never have been able to have gone Lunar. Signal 2 was red at the time the incident train passed it at 14.17.52. The incident train continued past Signal 2 and entered Switch 3(a) while in the reverse position.

The responding ATC Technicians received disciplinary actions resulting from their delayed arrival to the incident.

Office of Rail Transportation (RTRA)

Adopted from RTRA report:

The records of WMATA indicate the Train Operator #1 have been an employee since September 16, 2019, and a Train Operator since October 22, 2023. A review of the Train Operator's work record shows no major safety violations within the last twenty-four (24) months. The Train Operator was in violation of safety rules and procedures and received discipline in accordance.

Interview Findings

As part of the investigation launched into the event, SAFE 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.

RTRA

Train Operator

- The Train Operator stated that they were fully alert and felt comfortable operating the train even though it was their first day operating a train without a Line Platform Instructor (LPI).
- The Train Operator stated that after servicing L'Enfant Plaza Station, they closed the doors and proceeded to move the train.
- The Train Operator stated that they were not paying attention.
- The Train Operator stated they did not realize that they overran the signal until the MICC contacted them.

Train Operator #2

At the time that this report was submitted, Train Operator #2 remained on extended sick leave.

MICC

Radio RTC

- The Radio RTC stated that there was a rail defect at Mt. Vernon Square Station, and trains were single-tracking when they arrived on duty.
- The Radio RTC stated that they advised the Train Operator of the red signal at L'Enfant Plaza Station because they requested a permissive block before arriving at L'Enfant Plaza Station.
- The Radio RTC stated that the Train Operator reported they had just taken over operating the train, and they were not sure of what the signal was.
- The Radio RTC stated that there was a second Train Operator assisting at L'Enfant Plaza Station, and they were unaware that the second train operator was operating the train from National Airport Station.

Weather

On October 26, 2023, at the time of the incident, NOAA recorded the temperature as 77°F, with partly cloudy skies, winds of 8 mph, and 40% humidity. L'Enfant Plaza Station is located within a tunneled section of the rail system. The weather was not a contributing factor in this incident. (Weather source: NOAA) – Location: Washington, DC.

Related Rules and Procedures

Metrorail Operating Rulebook

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.

9.8 Speed Commands

- 9.8.1 Rail Vehicle Operator shall not move trains with zero speed commands except after notifying the Rail Traffic Controller or Terminal Supervisor and being given permission to move with zero speed commands and either a permissive block going with traffic or an absolute block going against traffic.
- 9.8.2 Upon losing speed commands on the platform, Rail Vehicle Operators shall not adjust the train in the same direction of traffic to service the station without contacting the Rail Traffic Controller or Terminal Supervisor for permission.
- 9.8.3 On 7000 Series Trains – If speed commands are lost on the mainline, and the consist to a complete stop with the Aspect Display Unit displaying the code number; the Operator must contact the Rail Traffic Controller or Terminal Supervisor to obtain either a permissive block or absolute block before entering the corresponding number on the Aspect Display Unit touchpad to enter Stop and Proceed Mode.

12.4 Radio Transmission & Reception Procedures

- 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 the message was received completely and by the intended receiver.

18.1 General Safety Rules

- 18.1.4 Employees shall always maintain situational awareness of their surroundings.

Human Factors

Fatigue

Signs and Symptoms of Fatigue

RTRA

Train Operator #1

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the incident was reviewed for behaviors suggesting fatigue. No indications of fatigue were evident from the video. The employee reported feeling fully alert at the time of the incident and reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

RTRA

Train Operator #1

Incident data was evaluated for fatigue risk factors. There were no major risk factors for fatigue identified. The incident time of day (14:17 hours) does not suggest an increased risk of fatigue-related impairment. The employee worked day and overnight shifts in the days leading up to the incident. The employee reported a total of 6 hours of sleep in the last sleep period preceding the incident and was awake for 10.3 hours at the time of the incident. The off-duty period preceding the incident was 11 hours, which provided the opportunity for 7-8 hours of sleep. The employee reported usual workday sleep durations of 8 hours and no issues with sleep.

Post-Incident Toxicology Testing

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

Findings

- An emergency involving repairs at Mt. Vernon Square Station was underway, requiring trains to single track before the Red Signal Overrun at L'Enfant Plaza Station.
- The Train Operator was not operating the train when the MICC provided the instructions to stand by at L'Enfant Plaza due to the red signal at F03-02.
- A second Train Operator was operating Train ID 309 and received the instruction from the MICC to stand by at L'Enfant Plaza Station due to the red signal at F03-02.
- The Train Operator was talking to the second Train Operator, who had exited the train when they began to move the train without noticing that the F03-02 signal was red.
- The Train Operator reported that they were unaware they had passed a red signal.
- Stop and Proceed de-activated, and the full-service brake was applied, causing the train to stop.
- The Train Operator failed to verify the presence of speed commands, a lunar signal, and correct rail alignment before closing the platform doors.
- Delayed response from ATC personnel due to a shift change.
- The amount of radio communications was increased due to the emergency at Mt. Vernon Square Station.
- The Train Operator was certified as a Train Operator on October 20, 2023, and passed their certification on the second attempt.

Immediate Mitigation to Prevent Recurrence

- ATCM personnel were dispatched to L'Enfant Plaza Station to inspect the switches.
- A Rail Supervisor took over operating the train.
- The Train Operator was removed from service.
- The train consist was removed for post-incident inspection.

Probable Cause Statement

The probable cause of the Red Signal Overrun event on October 27, 2023, at L'Enfant Plaza Station, identifies the failure of the Train Operator to adhere to procedures, including verifying speed commands and lunar signals, leading to the red signal overrun. Contributing factors include a human factors failure of complacency, and an inadequate safeguard with the Stop and Proceed software. Additionally, Train Operator #2, who received instructions from MICC, was not in control when the stand-by order was given at L'Enfant Plaza Station due to the red signal at F03-02.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
112409_SAFE CAPS_RTRA _001	(RC-1, CF-1) Train Operator to receive refresher training on red signal rules and procedures.	RTRA SRC	Completed
112409_SAFE CAPS_RTRA _002	Re-distribute Lesson Learned (No. 2021-002) – Red Signal Overrun	RTRA SRC	Completed

Appendices

Appendix A – Interview Summaries

The below narratives summarize 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.

RTRA

Train Operator

The Train Operator is a WMATA employee with four years of service and was recently certified as a Train Operator. The Train Operator holds a Roadway Worker Protection (RWP) Level 2 certification that expires in May 2024.

The Train Operator stated that they felt fully alert. The Train Operator stated that the day was extremely hectic and communication with Central was difficult; the MICC was not responding in a timely manner, and miscommunication was a factor.

The Train Operator stated that the last station they serviced was L'Enfant Plaza Station, and when they closed the doors, they proceeded to move the train.

The Train Operator stated that they were not paying attention. The Train Operator indicated they did not know they had overrun the signal until the MICC contacted them. The train operator stated that the MICC asked if they had passed the signal, and they responded that they had.

The Train Operator stated that the Station Manager came to the front of the train, and the train was offloaded. The Train Operator stated that a supervisor boarded the train and said they passed a red signal. The Train Operator said they were unaware they had run a red signal.

The train operator stated that this was their first time experiencing a “real-world” issue and that they would try to move forward in the future.

MICC

Radio RTC


The Radio RTC is a WMATA employee with eight years of service and two years of experience as a Rail Traffic Controller. The Radio RTC holds a Roadway Worker Protection (RWP) Level 4 certification that expires in February 2024.

The Radio RTC stated that there was a rail defect at Mt. Vernon Square Station, and trains were single-tracking when they arrived on duty. The Radio RTC stated that they granted a permissive block to Train ID 309 at Pentagon Station and requested the train's destination. The Radio RTC stated that they advised the Train Operator of the red signal at L'Enfant Plaza Station because they requested a permissive block before arriving at L'Enfant Plaza Station.


The Radio RTC stated that they were notified that there was a red sign overrun alarm at L'Enfant Plaza Station. The Radio RTC stated that the Train Operator reported they had just taken over operating the train, and they were not sure of what the signal was. The Radio RTC stated that they could tell that the Train Operator was new to operating trains from their responses.

The Radio RTC stated that there was a second Train Operator assisting at L'Enfant Plaza Station, and they were unaware that the second train operator was operating the train from National Airport Station; the train operator's voices sounded the same.

Appendix B – Train Operator’s Certification Evaluation



TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION



Name: [REDACTED]	Emp.No: [REDACTED]	Division: Rail Training	Date: 10-20-2023
------------------	--------------------	-------------------------	------------------

Reason for Certification: *Please place a check in an area below.*

Certification: Student Pre-certification: Student Division Request Re-Certification Return to Duty Other _____

Exam Administered	Score	Date Taken
MOR attempt #	88 %	8-30-23
TVOIM/TOIM attempt #	85 %	8-30-23
Supervisor Combination attempt #	%	
Practical attempt #: 2	QL-Pass	10-20-2023

Equipment (current/working condition)	Yes	No
MOR	✓	
Perm/Temp/Special Orders	✓	
Troubleshooting Guide	✓	
Flashlight	✓	
Safety Vest	✓	
Footwear	✓	
Identification (One Badge, RWP)	✓	

Comments:

Date:

10/20/23

10-20-2023

RTRA-906-01-00
TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION
Page 1

Document 1 - Train Operator’s Certification Evaluation Form, Page 1 of 4

Incident Date: 10/27/2023 Time: 14:17 hours
 Final Report – Red Signal Overrun
 E23766

Drafted By: SAFE 711 – 11/09/2023
 Reviewed By: SAFE 707 – 12/25/2023
 Approved By: SAFE 707 – 12/25/2023

Emp No. [REDACTED] Date: 10-20-2023

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet)

REMARKS (Remarks are required for a quality level score of 2 or 3) - ALL TIMES (are in minutes)

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (Remarks are required for a quality level score of 2 or 3) - ALL TIMES (are in minutes)
I. Preparation for Service		Cars Used:
1. Exterior Inspection		
2. Interior Inspection - Trailing Cab	N/A	
3. Interior Inspection - Each Car		
4. Interior Inspection - Oper. Cab		
5. Rolling Test / Rolling Brake Test		Time Allotted: 35:00 / Actual Time: :
II. Mainline Operation		
6. Communications		
7. Door Oper. & Station Stopping		
8. Use of Horn		
9. Speed Adherence/Manual Oper.		Time Allotted: 02:00 / Actual Time: :
10. Turn Back Moves		Location: :
11. Manual Route Selection		Location: :
12. EV Shutoff		Time Allotted: 03:30 (01:00) / Actual Time: :
III. Yard Operation		
13. Communications		
14. Yard Movements		
15. Coupling		Time Allotted: 08:00 (12:00) / Actual Time: : Cars Used: +
16. Uncoupling		Time Allotted: 05:00 (07:30) / Actual Time: : Cars Used: <
17. Isolation (Self-Recovery)		Time Allotted: 15:00 (22:30) / Actual Time: 10:49 Cars Used: 7710 < 76127
18. Manual Switch Operation		
IV. Miscellaneous		
19. Recovery Train Operation		Time Allotted: 12:00 (18:00) / Actual Time: : Cars Used: +
20. Troubleshooting Problem 1		7H ATC Fail (No Reset) #7578 03:49
Problem 2		Friction Brake slotted (No reset) #7579 07:05

Document 2 - Train Operator's Certification Evaluation Form, Page 2 of 4

Incident Date: 10/27/2023 Time: 14:17 hours
 Final Report - Red Signal Overrun
 E23766

Drafted By: SAFE 711 - 11/09/2023
 Reviewed By: SAFE 707 - 12/25/2023
 Approved By: SAFE 707 - 12/25/2023



TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION



Name: [Redacted] Emp. No: [Redacted] Division: *Training Dept.* Date: *10-15-2023*

Reason for Certification: Please place a check in an area below.

Certification: Student Pre-certification: Student Division Request Re-Certification Return to Duty Other _____

Exam Administered	Score	Date Taken	Equipment: (current/working condition)	Yes	No
MOR attempt #	<i>88</i> %	<i>8-30-23</i>	MOR	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TVOIM/TOIM attempt #	<i>85</i> %	<i>8-30-23</i>	Perm/Temp/Special Orders	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supervisor Combination attempt #	%		Troubleshooting Guide	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Practical attempt #: <i>1</i>	QL- <i>3</i>	<i>10-15-2023</i>	Flashlight	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Safety Vest	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Footwear	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Identification (One Badge, RWP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

Self-Recovery - depressed the isolation and uncouple switches (improperly self-recovery procedures)
Troubleshooting #1 - recycled train doors, cut out wrong pair of trucks before realizing wrong pair, also spent a long time just looking at troubleshooting guide before moving on to next steps.

[Redacted Signature] Date: *10-13-23*
10-13-23

Date: 10-13-2023

Emp No. : [REDACTED]

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet)


CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (Remarks are required for a quality level score of 2 or 3) - ALL TIMES (are in minutes)
I. Preparation for Service		Cars Used: 7524 X 7581
1. Exterior Inspection	1	Truck % 7525 Car Barrier 7524 Pax door open 7581
2. Interior Inspection - Tralling Cab	1	Radio #18 7524
3. Interior Inspection - Each Car	1	Emergency Evac Board 7524 Horn % 7581
4. Interior Inspection - Oper. Cab	1	ATP #6 Seal 7580
5. Rolling Test / Rolling Brake Test	1	Time Allotted: 35:00 / Actual Time: 33:38
II. Mainline Operation		
6. Communications	1	
7. Door Oper. & Station Stopping	1	
8. Use of Horn	1	
9. Speed Adherence/Manual Oper.	1	
10. Turn Back Moves	1	Location: Haysville Crossing E06 Time Allotted: 02:00 / Actual Time: 01:55
11. Manual Route Selection	1	Location: Green Salt Station E10
12. EV Shutoff	1	Time Allotted: 00:30 (01:00) / Actual Time: 00:29
III. Yard Operation		
13. Communications	3	
14. Yard Movements	1	
15. Coupling	1	Time Allotted: 08:00 (12:00) / Actual Time: 07:04 Cars Used: 7201 + 7297
16. Uncoupling	1	Time Allotted: 05:00 (07:30) / Actual Time: 04:56 Cars Used: < 7296 > 7524
17. Isolation (Self-Recovery)	3	Time Allotted: 15:00 (22:30) / Actual Time: - : - Cars Used: 7200 X 7297 X 7524 X 7581
18. Manual Switch Operation	1	Switch # 201
IV. Miscellaneous		
19. Recovery Train Operation	3	Time Allotted: 12:00 (18:00) / Actual Time: 10:51 Cars Used: 7524 + 7296
20. Troubleshooting #1	3	Friction Brake #18 7297 (15.39 sec) Cars Used 7200 X 7297 X 7524 X 7581
#2	1	Pax door open 7201 (04.99 sec)

Document 4 - Train Operator's Certification Evaluation Form, Page 4 of 4

Incident Date: 10/27/2023 Time: 14:17 hours
 Final Report – Red Signal Overrun
 E23766

Drafted By: SAFE 711 – 11/09/2023
 Reviewed By: SAFE 707 – 12/25/2023
 Approved By: SAFE 707 – 12/25/2023

Appendix C – ATCE Oracle Report

	Washington Metropolitan Area Transit Authority ENGA-ATCE		Request: 2023 Nov 02		
			Date: 2023 NOV 06		
			[REDACTED]		
			[REDACTED]		
Location: F03		Time of incident: 14:18	Date of incident: 2023 Oct 27	Train ID: 309	
Description: Train 309 Overran F03-02 Signal RED			Control of interlocking: Central		
Initial state as of: 14:00:00					
Name	State	Auto	Name	State	Auto
Interlocking Control	Central		Signal Fleeting 02	NOT FLEET	
Switch Position 1	Normal		Track Circuit 1AT	VACANT	
Signal State 02	RED		Track Circuit F1-44	OCCUPIED	

Time	Status/Control	AIMS Description	Comments
14.00.00	STATUS	Track Circuit F1-44 Occupied	Train prior to incident train is already on F03/L'Enfant Plaza Platform, Tack 1
14.03.43	STATUS	Signal State 02 Clear	Signal 02 goes LUNAR
14.03.45	STATUS	Signal Fleeting 02 Fleeted	Signal 02 commanded FLEETED
14.04.07	STATUS	Track Circuit 1AT Occupied	Train prior to incident train occupies interlocking
14.04.07	STATUS	Signal State 02 Stop	Signal 02 goes RED due to occupancy
14.04.21	STATUS	Track Circuit 3AT Vacant	Tail end of train prior to incident train clears interlocking
14.04.28	STATUS	Signal State 02 Clear	Signal 02 goes LUNAR
14.05.24	STATUS	Signal Fleeting 02 Not Fleet	Signal 02 Fleeting has been cancelled
14.05.44	STATUS	Signal State 02 Stop	Signal 02 goes RED; Route cancelled
14.06.20	STATUS	Signal 04 Entrance Received	ROCC attempting to align 04 to 06 route
14.06.24	STATUS	Switch Call 3 Reverse	Switch 3 is called to the REVERSE position
14.06.24	STATUS	Switch Position 3 Out of Correspondence	Switch 3 unlocks lock dog mechanism and begins movement to another position
14.06.29	STATUS	Switch Position 3 Reverse	Switch 3 has completed movement to REVERSE position and lock dog is engaged.
14.06.30	STATUS	Signal State 04 Clear	Route 04 to 06 Signal has been established; Signal 04 is LUNAR
14.06.33	STATUS	Signal State 04 Stop	Signal 04 is RED; Route 04 to 06 has been cancelled.
			Continued on following page
14.15.49	STATUS	Track Circuit F1-49 Occupied	Incident Train has entered F03/L'Enfant Plaza Platform, Track 1

FINAL
11/06/2023

Incident Report 0.0
Page 1 of 2

Incident Analysis Report F03 Train 309 Ran Red-Trailed switch _2023_10_27(FINAL)

Document 5 – ATCE Oracle Report, Page 1 of 2

Incident Date: 10/27/2023 Time: 14:17 hours
Final Report – Red Signal Overrun
E23766

Drafted By: SAFE 711 – 11/09/2023
Reviewed By: SAFE 707 – 12/25/2023
Approved By: SAFE 707 – 12/25/2023

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14.16.45	STATUS	Track Circuit F1-44 Occupied	Incident Train has approached the end of F03/L'Enfant Plaza Platform, Track 1
14.17.52	STATUS	Track Circuit 1AT occupied	Incident Train has entered Switch 1A (Passed Insulated Joint at Chain Marker F1 44+74)
14.17.54	STATUS	Track Circuit 3AT occupied	Incident Train has entered Switch 3A (Passed RX/RX Bond at Chain Marker F1 43+75)

Alarm Status

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

Switch 1(a) and 3(a), and Signal 2 were operating properly and facilitated train movement over/through them prior to incident.

At 14.06.24, a reverse route was called and switch 3 was placed in the REVERSE (Crossover) position.

Signal 2 would NEVER have been able to have gone Lunar.

Signal 2 was RED at the time the incident train passed it at 14.17.52.

The incident train continued past Signal 2 and entered Switch 3A while in the REVERSE position. This "Trails" the switch and can potentially cause damage or derailment.



FINAL
11/06/2023

Incident Report 0.0
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Appendix D – Why-Tree Analysis

