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Improper Door Operation
Vienna/Fairfax-GMU, Fort Totten, Downtown Largo and King Street-Old Town stations
October 6, 2024, October 10, 2024, October 29, 2024, and November 25, 2024

Document Purpose:

This WMSC written report on WMATA Metrorail's safety event investigations and review of Metrorail's findings in accordance with the WMSC Program Standard, in conjunction with the attached Metrorail investigation reports that have undergone WMSC staff review and, if necessary, feedback and revision, describes the investigation activities, identifies factors causing or contributing to the safety events, 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 reports) as a unified item for adoption at the Washington Metrorail Safety Commission meeting on August 5, 2025.

WMSC staff recommend adoption of these investigations.

Improper Door Operation

In 2024, there were 25 improper door operations safety events reported by Metrorail to the WMSC. As of July 15, 2025, there have been 18 such events reported, an increase from the 10 events reported during the same time period last year. Starting in December 2023, following the substantial completion of Metrorail safety certification activities Metrorail received WMSC concurrence to activate the Automatic Door Operation (ADO) feature on the Metrorail system incrementally, starting with the Red Line in December 2023. By June 2024, the WMSC provided concurrence for activation of ADO on all Metrorail lines. The events outlined below all occurred while trains were required to operate in ADO. Direct causes of improper door operations can include human error (such as pressing a button to open doors on the wrong side or opening doors when the train is not on the platform) or mechanical defects.

The causes of and contributing factors to the events described in more detail below include:

- Loss of/lack of focus and situational awareness
- Non-compliance with written operational rules and procedures including those related to door operation and station servicing procedures

As a result of these investigations, Metrorail implemented corrective actions including:

- Rail Traffic Controllers began making hourly announcements reminding train operators to operate in Automatic Door Operations as required and to utilize the point-and-call method when doors must be opened manually
- Personnel attended refresher training on applicable rules and procedures, including door operations
- Metrorail redistributed a Personnel Notice reminding all the train operators to utilize the point-and-call method

- Metrorail's Department of Safety developed a Rail Vehicle Operator Outreach Program to increase rule compliance regarding door operations

Safety event summaries:

W-0384 – Vienna/Fairfax-GMU Station – October 6, 2024 (WMATA ID: E24796)

At 9:14 p.m., on Sunday, October 6, 2024, a train operator at Vienna/Fairfax-GMU Station opened train car doors on the non-platform side of the train by activating the right-side Door Open pushbutton. Train Operator #2 had just taken over operation of the 8-car train, which was properly berthed on the platform, from Train Operator #1. Train Operator #2 did not look out of the operator's cab window or use the point-and-call method, as required by Metrorail policy, to verify the platform side prior to activating the Door Open pushbutton. Approximately 14 seconds later, the Train Operator activated the left-side Door Open pushbutton, opening the platform-side doors while the non-platform side doors remained open. After closing the platform-side doors, the Train Operator noticed that the door signal light was still illuminated. Unaware that the door signal light was still illuminated because they had opened the doors on the non-platform side of the train, the Train Operator opened and closed train doors on the platform side and then notified the Terminal Supervisor that they were unable to receive an all doors closed indication.

At 9:17 p.m., after providing Train Operator #2 with troubleshooting instructions that were unsuccessful, the Terminal Supervisor began to inspect the train and initially determined that one door was open on the non-platform side of the train. The Terminal Supervisor notified the Control Center that a customer opened the door on the non-platform side of the train. After further inspection, the Terminal Supervisor notified the Rail Traffic Controller that doors were open on the non-platform side on six of the eight railcars in the consist and advised that they would conduct a ground walk around inspection (to ensure no one had fallen onto the roadway). Unaware of the operational error by Train Operator #2, the Terminal Supervisor was directed to remove Train Operator #1. Therefore, Train Operator #1 was removed from service for post-incident toxicology testing and Train Operator #2 was instructed to operate another train in passenger service toward New Carrollton. The train involved in the safety event was removed from service in accordance with Metrorail policy, which requires that a train involved in an improper door operation safety event be immediately removed from passenger service and inspected to ensure the absence of a mechanical malfunction that would have contributed to the event.

Further investigation determined that Operator #2, not Operator #1, was responsible for the improper door operation and Operator #2 was removed from service for post-event toxicology testing when their train arrived at New Carrollton Station.

W-0385 – Fort Totten Station – October 10, 2024 (WMATA ID: E24792)

At 8:07 p.m., the Train Operator of Train 504 opened train doors on the non-platform side of the train on track 2 at Fort Totten Station. An investigative data review showed that the Train Operator, in accordance with Metrorail procedure, activated the Train Berth pushbutton as the train approached the station to initiate Automatic Door Operation (ADO). Data reviewed determined the train stopped 2 feet short of the 8-car marker at 8:07:06 p.m. Because the train's entire

consist was within the station's platform limits and within the required threshold, train doors opened under ADO on the platform side of the train as intended. The Train Operator looked out of the operator's cab onto the platform prior to initiating the Door Close pushbutton as required by Metrorail policy. Data showed that at 8:07:37 p.m., the Train Operator activated the right-side Door Open pushbutton, which opened train doors on the non-platform side of the train. The Train Operator closed the non-platform-side doors approximately 11 seconds after they had been opened. At 8:08 p.m., the Train Operator notified the Radio Controller in the Control Center that train doors were opened on the non-platform side of the train. The Rail Traffic Controller instructed the Train Operator to offload riders from the train and conduct a ground walk around inspection (to ensure that no one had fallen onto the roadway). A Rail Supervisor was sent to the station to remove the Train Operator from service and take over the train. The train was transported to Branch Avenue Rail Yard for post-event inspection, which determined that the train had no defects that would have contributed to the improper door operation. During an investigative interview the Train Operator stated that they were rushing. This likely caused a loss of situational awareness, leading to the improper door operation.

W-0386 – Downtown Largo Station – October 29, 2024 (WMATA ID: E24871)

At 2:24 p.m., the Train Operator of Train 433 stopped the 8-car consist 20 feet short of the 8-car marker at Downtown Largo Station, leaving two doors of the trailing car off the station's platform. The Train Operator of Train 433 then manually opened the train's doors. An investigative review of audio showed that at 2:44 p.m., the Train Operator requested permission from the Largo Terminal Supervisor to enter the platform limits at Downtown Largo Station on track 2 from Morgan Boulevard Station. The Terminal Supervisor granted permission, giving a permissive block to cross over from track 1 to track 2. The Terminal Supervisor instructed the Train Operator to operate to the 8-car marker utilizing Automatic Door Operations (ADO). An investigative review of data showed that the Train Operator activated the Train Berth pushbutton 5 feet before the train came to a stop 20 feet from the 8-car marker. During an investigative interview, the Train Operator stated that they thought they had a 6-car consist instead of an 8-car consist. Closed Circuit Television (CCTV) footage showed that the Train Operator looked down the platform from the operator's cab window, as required by Metrorail Policy to verify the train was properly berthed. However, the Train Operator apparently did not see that half a railcar was outside the station's platform limits. The Train Operator activated the Right Door Open pushbutton, keyed down the train and walked to the opposite end of the train to prepare to operate from that end back toward Franconia-Springfield.

At 2:51 p.m., the Terminal Supervisor reported the improper door operation to the Radio Rail Traffic Controller in the Control Center. At 2:57 p.m., a ground walk around was completed by a yard operator to confirm no one had fallen onto the roadway. There were no injuries or damage reported from this safety event.

In accordance with Metrorail policy, the train was removed from service for inspection, and the Train Operator was removed from service for post-event toxicology testing.

W-0387 – King Street-Old Town Station – November 25, 2024 (WMATA ID: E24950)

The Train Operator of Train 332 mistakenly opened doors on the non-platform side of the train while attempting to manually reopen train doors to allow another train operator to board. This safety event occurred at King Street-Old

Town Station, an outdoor aerial station. The improper door operation exposed passengers to the risk of a steep fall from a high elevated structure, increasing the hazard severity of this event.

At 4:20 p.m., as Train Operator #1, who was operating Train 322, closed train doors after servicing the station, they heard radio communication between the Radio Rail Traffic Controller in the Control Center and Train Operator #2, who was located on the platform at King Street-Old Town Station. Train Operator #2 had intended to board the train prior to the doors closing but was delayed when a rider requested assistance for another rider using a wheelchair, who was trying to exit the train. At approximately 4:21:21 p.m., after hearing Train Operator #2's request to hold their train, Train Operator #1 mistakenly activated the right-side Door Open pushbutton to allow Train Operator #2 to board. During an investigative interview, Train Operator #1 noted that as they looked out the operator's cab window, they thought that a child might be stuck in the train doors because they observed several people on the platform waving and yelling. At 4:21:28 p.m., Train Operator #1 activated the left-side Door Open pushbutton, opening doors on the platform side. At 4:21:42 p.m., Train Operator #1 closed the train doors on the non-platform side and notified the Radio Rail Traffic Controller in the Control Center of the improper door operation. Train Operator #1 was instructed to offload riders from the train onto the platform. At 4:26:21 p.m., the Radio Rail Traffic Controller granted Train Operator #1 Foul Time protection to perform a ground walk around inspection to ensure no one had fallen to the roadway.

Train Operator #1 was instructed by the Radio Rail Traffic Controller to transport the out of service train to Alexandria Rail Yard for an inspection, which later determined there were no defects and that the train operated as commanded. Train Operator #1 was removed from service for post-event toxicology testing at Alexandria Rail Yard after a data review determined they manually opened train doors on the non-platform side of the train.

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

FINAL REPORT OF INVESTIGATION A&I E24796

Date of Event:	October 6, 2024
Type of Event:	Improper Door Operation
Incident Time:	21:14 Hours
Location:	Vienna Station, Track 1
Time and How received by SAFE:	21:26 Hours – Safety Information Officer (SIO)
WMSC Notification Time:	21:38 Hours
Responding Safety Officers:	None
Rail Vehicle:	Train ID 923 L7676-77x7583-82x7258-59x7355-54T
Injuries:	None
Damage:	None
Emergency Responders:	None
SUDS I/A Incident Number:	20241006#120420MX

Vienna Station, Track 1 – Improper Door Operation

October 6, 2024

Table of Contents

Abbreviations and Acronyms

AIMS	Advanced Information Management System
ARS	Audio Recording System
ATC	Automatic Train Control
CCTV	Closed-Circuit Television
CMOR	Office of Chief Mechanical Officer
ER	Event Recorder
IIT	Incident Investigation Team
MICC	Metro Integrated Command and Communications Center
MOR	Metrorail Operating Rulebook
NOAA	National Oceanic and Atmospheric Administration
PPE	Personal Protective Equipment
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
RVO	Rail Vehicle Operator
SAFE	Department of Safety
SPOTS	System Performance On-Time Summary
SUDS	Safety Universal Data System
VMDS	Vehicle Monitoring Data 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, October 6, 2024, an 8-car 7000 series Train ID 923 operated by a West Falls Church Division, Rail Vehicle Operator (RVO) #2, experienced an Improper Door Operation event at Vienna Station on track 1.

RVO #1 operated Train ID 950 into Vienna Station track 1 and was instructed by the Terminal Supervisor to place the train out of service.

The Terminal Supervisor instructed RVO #2 to place the same train on track 1 in revenue service as Train ID 923. RVO #2 keyed up in the lead car 7676 and depressed the right-side door open button, which opened the train doors on the non-platform side. Then RVO #2 opened the train doors on the platform side while the non-platform side doors remained open. The RVO cycled the doors by closing and opening the train doors on the platform side several times in an attempt to extinguish the illuminated door signal lights. When RVO #2 was unable to receive an all doors closed indication, RVO #2 notified the Terminal Supervisor of the problem.

While standing at the operator's cab window, the Terminal Supervisor instructed RVO #2 to recycle the Automatic Train Control (ATC[1]) package and then walked along the platform to inspect the train. The Terminal Supervisor observed the doors open on the off platform through the window of car 7583. They returned to the blockhouse and retrieved their Personal Protective Equipment (PPE)[2] and notified the Metro Integrated Command and Communications Center (MICC) of the Improper Door Operation. They were instructed to hold RVO #1 for a post-incident medical examination.
The Terminal Supervisor conducted an exterior inspection of the train to verify whether any customers had exited onto the roadway.

RVO #2 was instructed to operate the train on track 1 towards New Carrollton.

Further investigation concluded that RVO #2 opened the train doors off the platform, and when they arrived at New Carrollton Terminal, they were removed from service for a post-incident medical examination.

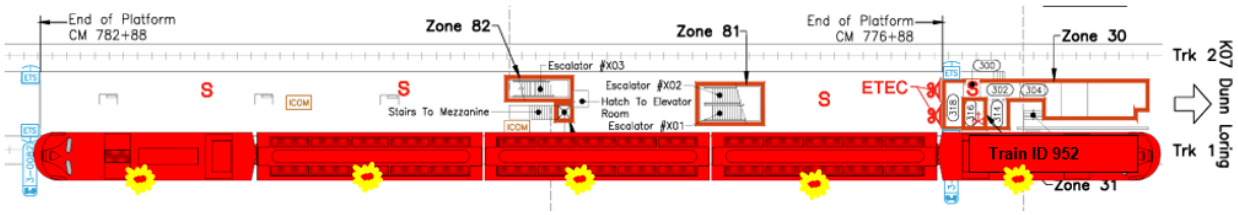
The probable cause of the improper door operation was RVO #2 rushing through the task. Specifically, when RVO #2 placed the train in revenue service, they keyed the train up and depressed the door open button on the off-platform side instead of placing their heads out the operator's cab window to verify the presence of the platform and utilizing the point-and-call method.[3]

[1] De-active and reactive ATC Power Supply & ATC System circuit breakers.
[2] High Visibility Safety Vest, Radio, and Flashlight.
[3] A systematic process of pointing and verbalizing, which ensures correct actions are taken at critical process points.

Incident Site

Vienna Station, Track 1

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 video and document review.

- Formal Interviews – SAFE interviewed two individuals 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 individuals:
  - Rail Vehicle Operator #2
  - Terminal Supervisor

- 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:
  - Training Records
  - Certifications
  - 30-Day work history review
  - Metrorail Operating Rulebook (MOR)
  - National Oceanic and Atmospheric Administration (NOAA)

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
  - Audio Recording System (ARS) playback – Vienna Ops and Landline
  - The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Vehicle Monitoring and Diagnostic System (VMDS)
  - Closed-Circuit Television (CCTV)

- System Performance On-Time Summary (SPOTS)

Investigation

According to the Audio Recording System (ARS) playback prior to the Improper Door Operation event, RVO #1 operated Train ID 950 into Vienna Station track 1 and was instructed by the Terminal Supervisor to place the train of service. RVO #1 operated the train to the 8-car marker and allowed all customers to exit before closing the train doors and walking through the train to trailing car 7676.

During a formal interview, it was revealed that the Terminal Supervisor instructed RVO #2 to place the train on track 1 in revenue service as Train ID 923.

According to CCTV, at 21:14:03 hours, RVO #1 exited the train via car 7676's doors #7 & #8, and RVO #2 entered the train. RVO #2 closed train doors 7 & 8 with a crew key.

According to the Vehicle Monitoring Data System (VMDS), at 21:14:14 hours, RVO #2 keyed up the train in car 7676 and pressed the right-side doors open button twice within 0.1 seconds of each other.

Closed Circuit Television (CCTV) from car 7676 reveals RVO #2 keyed up the train and depressed the right-side door open button on the off-platform side without placing their head out of the operator's cab window. RVO #2 then opened the train doors on the platform side while the off-platform side door remained open. RVO #2 closed and opened the train door on the platform side several times to extinguish the illuminated door signal light.

Figure 1 – Rail Car 7676 Console video depicts RVO #2 depressing the Door Open Button on non-platform side.

At 21:16:02 hours, RVO #2 notified the Terminal Supervisor via the radio that they were experiencing a door problem.

During the formal interview, it was revealed that while standing at the operator's cab window, the Terminal Supervisor instructed RVO #2 to recycle the ATC package and then walked along the platform to inspect the train.

According to CCTV, at 21:16:29 hours, the train doors closed on the platform side.

According to CCTV, at 21:17:30 hours, the Terminal Supervisor walked the platform and observed the doors open on the off platform through the window of car 7583. They returned to the blockhouse, retrieved their PPE, notified the MICC of the Improper Door Operation, and were instructed to hold RVO #1 for a post-incident medical examination. The Terminal Supervisor inspected the train exterior and verified that no customers had exited onto the roadway.

According to the VMDS report, at 21:16:41, both ATC breakers were cycled[4]. At 21:27:55 hours, car 7676 was keyed up, and the doors were closed on both sides of the train. At 21:28:48, car 7676 was keyed down.

During a formal interview, the Terminal Supervisor provided multiple accounts regarding the sequence of events involving a train that experienced doors opening on the non-platform side at Vienna Station.

The Terminal Supervisor initially stated that RVO #1 brought the train into the Vienna platform and was instructed to take the train out of service, ensure it was clear of passengers, and prepare it for movement to the West Falls Church rail yard. They then claimed to have instructed RVO #2, whose scheduled train had not yet arrived, to place the same train in service on track 1.

Following the operator change-off, during which RVO #1 keyed off and RVO #2 keyed on, the Terminal Supervisor stated that no door signal lights were illuminated. However, they later reported hearing RVO #2 yell that the train doors would not close. Upon returning to the platform, the Terminal Supervisor observed door signal lights illuminated along the train and instructed RVO #2 to reset both the ATC Power Supply and ATC System circuit breakers.

While walking the platform, the Terminal Supervisor observed doors open on the non-platform side at the third car and returned to the blockhouse to retrieve PPE. They then notified the MICC that the train on the platform had a door open on the non-platform side. They then walked the remainder of the 8-car consist and discovered that the doors on the trailing six of eight cars were also open on the non-platform side.

After updating MICC, the Terminal Supervisor stated they were directed to remove RVO #1 from service. They conducted a full exterior inspection and confirmed that no customers exited onto the track area. The train was removed from service. And RVO #2 was subsequently assigned to another arriving train to continue service toward New Carrollton.

According to the ARS at 21:56:42 hours, the Buttons RTC was informed by the Terminal Supervisor that the incident RVO was RVO #2, who operated from Vienna to New Carrollton Station. They were removed from service at New Carrollton Station.

[4] Cycling ATC breakers while the train doors are open will close all doors in that pair of railcars to close.

Chronological Event Timeline

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

Time	Description
21:05:39 hours	Train ID 950: RVO #1 contacted the Terminal Supervisor and announced that the train was approaching Vienna Station. Terminal Supervisor: Acknowledged. Instructed to remove the train from service and verify the train was clear of customers. Train ID 950: Acknowledged. [Radio VNA]
21:07:26 hours	Train ID 950 arrived at Vienna Station on track 1, and the train doors opened on the platform side. [CCTV]
21:09:01 hours	Train ID 950: The train doors closed; the train was keyed down. [CCTV]
21:14:03 hours	RVO #1 exited the train, and RVO #2 entered the train via 7676. [CCTV]
21:14:14 hours	RVO #2 closed doors 7 & 8 with crew key. [CCTV]
21:14:28 hours	The train doors opened on the non-platform side. [CCTV]
21:14:33 hours	The train doors opened on the platform side. [CCTV]
21:15:20 hours	The train doors closed on the platform side. [CCTV]
21:15:37 hours	The train doors opened on the platform side. [CCTV]
21:15:49 hours	The train doors closed on the platform side. [CCTV]
21:16:02 hours	RVO #2: Reported to the Terminal Supervisor that there was a problem with the train doors. [Radio VNA]
21:16:24 hours	The train doors opened on the platform side, and the Terminal Supervisor approached the operator's cab window. [CCTV]
21:16:29 hours	The train doors closed on the platform side. [CCTV]
21:16:41 hours	Both ATC Breakers were cycled. [VMDS]
21:16:53 hours	Car #7676 door signal light extinguished. [CCTV]
21:17:30 hours	Terminal Supervisor: Walks the platform and observes the door open on the non-platform side of car 7583. [CCTV]
21:18:24 hours	Terminal Supervisor: Contacted the MICC and reported that a customer opened the door on the non-platform side. Advised they would complete a ground walk around. Button RTC: Requested confirmation if the door was opened by the RVO or a customer. Terminal Supervisor: Advised that a customer may have attempted to exit the train. [Radio VNA]
21:19:14 hours	Button RTC: Notified Rail 2 that a customer opened a train door on the non-platform side. [Phone]
21:22:37 hours	Terminal Supervisor: Reported to the Button RTC that the trailing six cars on the train doors were open on the non-platform side. [Phone]
21:23:02 hours	Terminal Supervisor: Entered the train through rail car 7354. [CCTV]
21:25:28 hours	Rail 1: Notified SIO that RVO #1 activated the train berth and the train doors opened on the non-platform side. [Phone]
21:27:55 hours	Terminal Supervisor: Reported they were back on the platform and no customers entered the roadway. They relinquished foul time and advised that six of the eight cars' doors opened on the non-platform side. Radio RTC: Requested information be broadcasted via radio and the RVO's information.
21:32:02 hours	Terminal Supervisor: Updated the Button RTC with RVO #1 employee information. [Phone]
21:38:21 hours	SIO: Notified WMSC of the incident. [Phone]

Time	Description
21:56:42 hours	Button RTC: Requested clarification on the improper door operation incident. Terminal Supervisor: Advised RVO #1 operated Train ID 950 onto the platform of Vienna track 1 and was placed out of service. They instructed RVO #2 to place the train on track 1 in-service as Train ID 923 due to their train running late to arrive at Vienna. They saw no door signal lights illuminated initially and then heard the RVO #2 report they were having a door problem getting an All Doors Close. They returned to the platform and observed illuminated door signal lights except for the lead duce. They walked the platform, observed through the window of the third car that the door was open on the non-platform side, and reported the incident to the MICC. [Phone]
22:03:44 hours	Terminal Supervisor: Reported to Rail 1 that RVO #1 placed the train out of service, walked through the train, and keyed themselves off the train. RVO#2 keyed up the train, and the doors of six cars on the trailing car were opened on the off-platform side. Advised that they had RVO #1 in their custody and allowed RVO #2 to continue operating Train ID 923 towards New Carrollton Station as instructed by the RTC. Rail 1: Instructed the Terminal Supervisor to complete an incident report. [Phone]

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

Advanced Information Management System (AIMS)

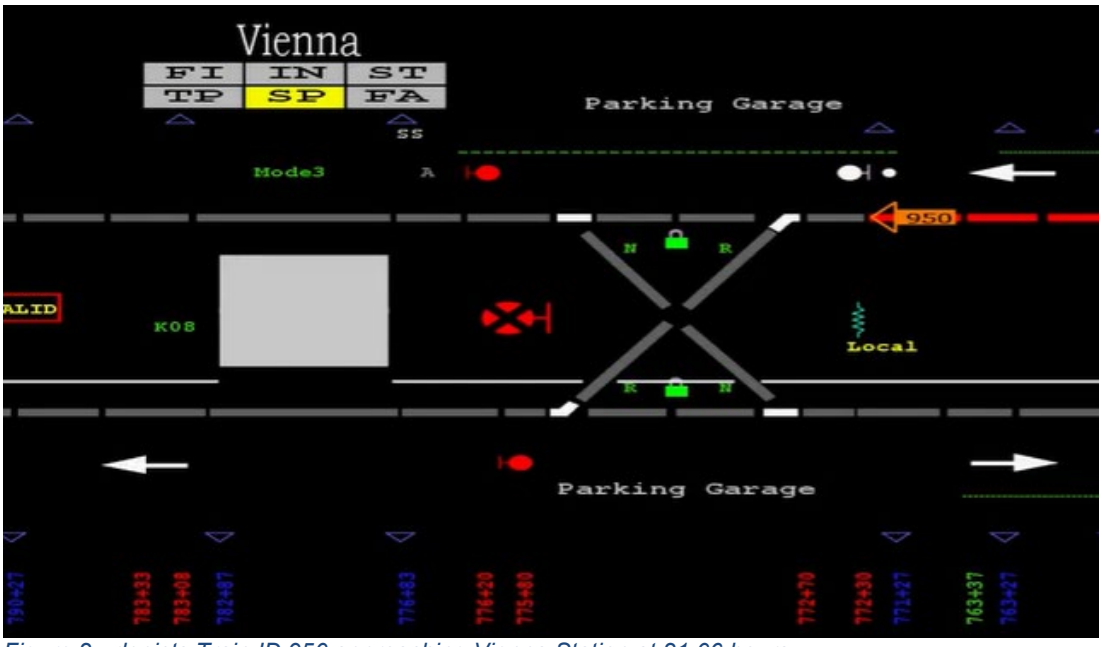


Figure 2 - depicts Train ID 950 approaching Vienna Station at 21:06 hours.

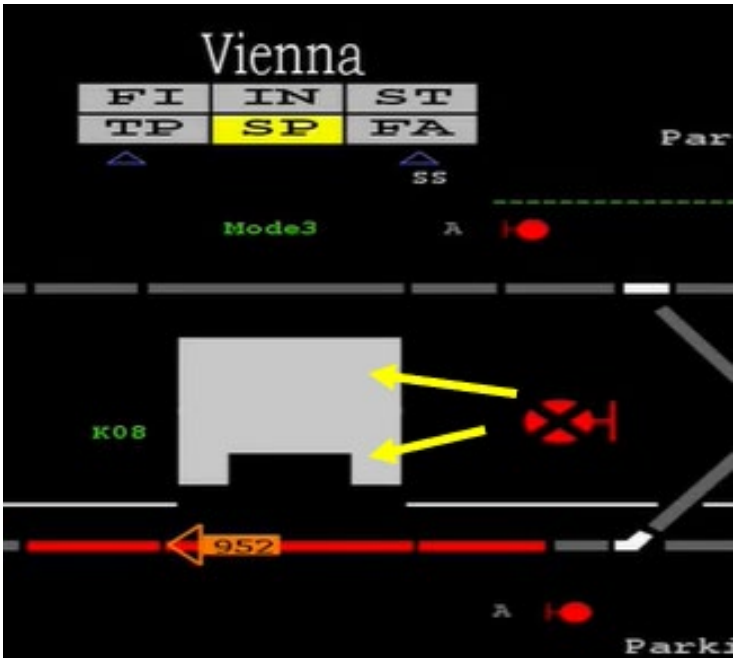


Figure 3 (Yellow arrows) A grey square and a black rectangle indicate that the train doors opened on the platform side at 21:08.

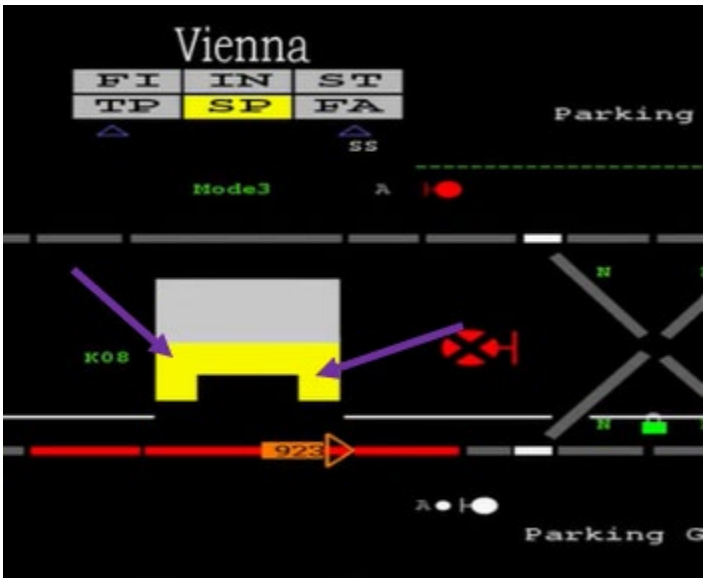


Figure 4 – (Purple arrows) A yellow square and a black rectangle indicate that the train doors opened on the off-platform side at 21:14.

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

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

IIT has downloaded and analyzed data retrieved from Cars 7354 and 7676.

Based on VMDS and ER data, Train ID 923, came to a second complete stop 4 feet before the Vienna platform limits on track #1. The train Berthed Pushbutton was activated. Then, Right Door Open Trainline signal went High, indicating Right Side Doors at the platform side on track #1. The

Right Door Close pushbutton was activated, the Right Doors were closed, and the All Doors closed and locked signal went High. At 21:08:56.220, Lead car 7354 was keyed down.

At 21:08:56.220, Lead car 7354 was keyed down.

At 21:14:14.780, car 7676 was keyed up to reverse the train on track #1.

Based on the ER data, the Door Open Right Pushbutton was pressed twice, less than 0.1 second each time, and the Door Open Right Trainline went High, causing several right doors to open on the opposite platform side, with the exception of the lead car 7676. The Left Door Open and Close pushbuttons were activated several times, and the Left Door Open/Close train lines went High, indicating doors opened and closed at the platform side.

Based on the VMDS data, both ATC Breakers were cycled between 21:16:41.180 and 21:17:48.580.

Based on the Front-End NVR video on car 7676, doors #1 and #2 were opened opposite the platform, and doors #7 and #8 were opened in the normal side of the platform.

At 21:17:56.860, the Lead Car 7676 was then keyed down.

At 21:27:55.120, the Lead Car 7676 was keyed up.

The Door Close Right pushbutton was activated multiple times, and the Door Close Right Trainline went High, closing the right-side doors.

The Door Close Left pushbutton was activated, and the Door Close Left Trainline went High, closing the left side doors to terminate the door operation time with All Door Closed and Locked Trainline High.

Based on the VMDS and ER data, the train performed as commanded, and no fault contributed to the cause of this incident.

Time	Description of Events
21:07:21.530	Train ID 923 came to a complete stop 13 feet before the 8-car marker at Vienna Station, Track #1.
21:07:32.050	The zero-speed signal was low, and the train started to move toward the 8-car marker.
21:07:42.910	The Train Berthed Pushbutton was activated.
21:07:43.030	The consist came to a complete stop 4 feet before the 8-car marker.
21:07:48.920	The Door Open Trainline signal went High, opening the Right-Side Doors at the platform side.
21:08:43.410	The Right Door Close pushbutton was activated, the Right Door Close Trainline went High, and the Right Doors Closed.
21:08:56.220	The lead car, 7354, was keyed down.
21:14:14.780	Car 7676 was keyed up.

Time	Description of Events
21:14:17.970 21:14:18.090	The Door Open Right Pushbutton was pressed twice and kept less than 0.1 second each time, and the Door Open Right Trainline went High. The Right Doors opened on the off-platform side.
21:14:22.560	The Door Open Left pushbutton activated, and the Door Open Left Trainline went High. Left Doors opened on the platform.
21:15:06.190	The Door Close Left pushbutton was activated, and the Door Close Left Trainline went High, closing the left side doors.
21:15:25.690	The Door Open Left pushbutton activated, and the Door Open Left Trainline went High. Left Doors opened on the platform.
21:15:34.040	The Door Close Left pushbutton was activated, and the Door Close Left Trainline went High, closing the left side doors.
21:16:12.140	The Door Open Left pushbutton activated, and the Door Open Left Trainline went High. Left Doors opened on the platform.
21:16:15.090	The Door Close Left pushbutton was activated, and the Door Close Left Trainline went High, closing the left side doors.
21:17:05.410	The Door Open Left pushbutton activated, and the Door Open Left Trainline went low. The Left Doors did not open on the platform.
21:17:56.860	Car 7676 was keyed Down.
21:27:55.120	Car 7676 was keyed up.
21:27:57.280	The Door Close Right pushbutton was activated multiple times, and the Door Close Right Trainline went High, closing the right-side doors.
21:28:35.080	The Door Close Left pushbutton was activated, and the Door Close Left Trainline went High, closing the left side doors.
21:28:39.610	All doors are closed and the locked trainline is high to terminate the door operation time.
21:28:45.800	Car 7676 was keyed Down.

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

B- ER DATA ANALYSIS

7354 ER ANALYSIS

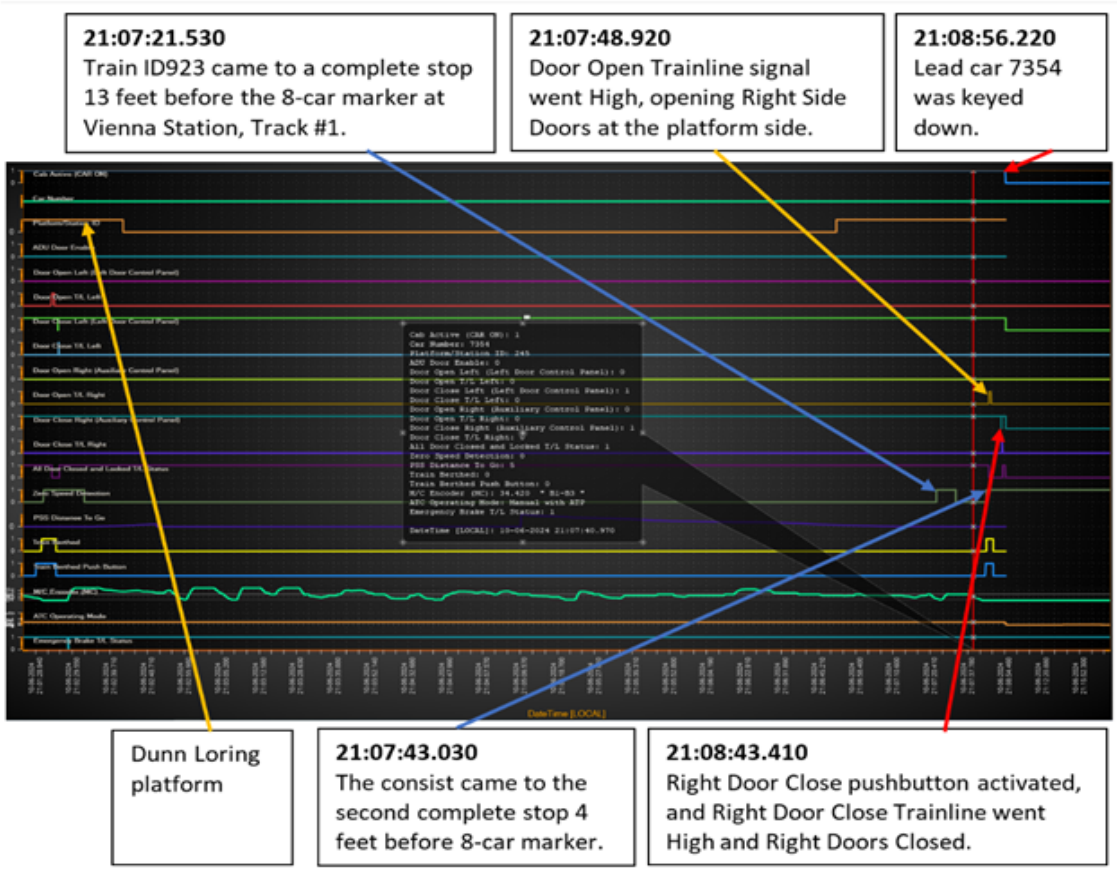


Figure 5 - 7354 Event Recorder Analysis 1 of 2.

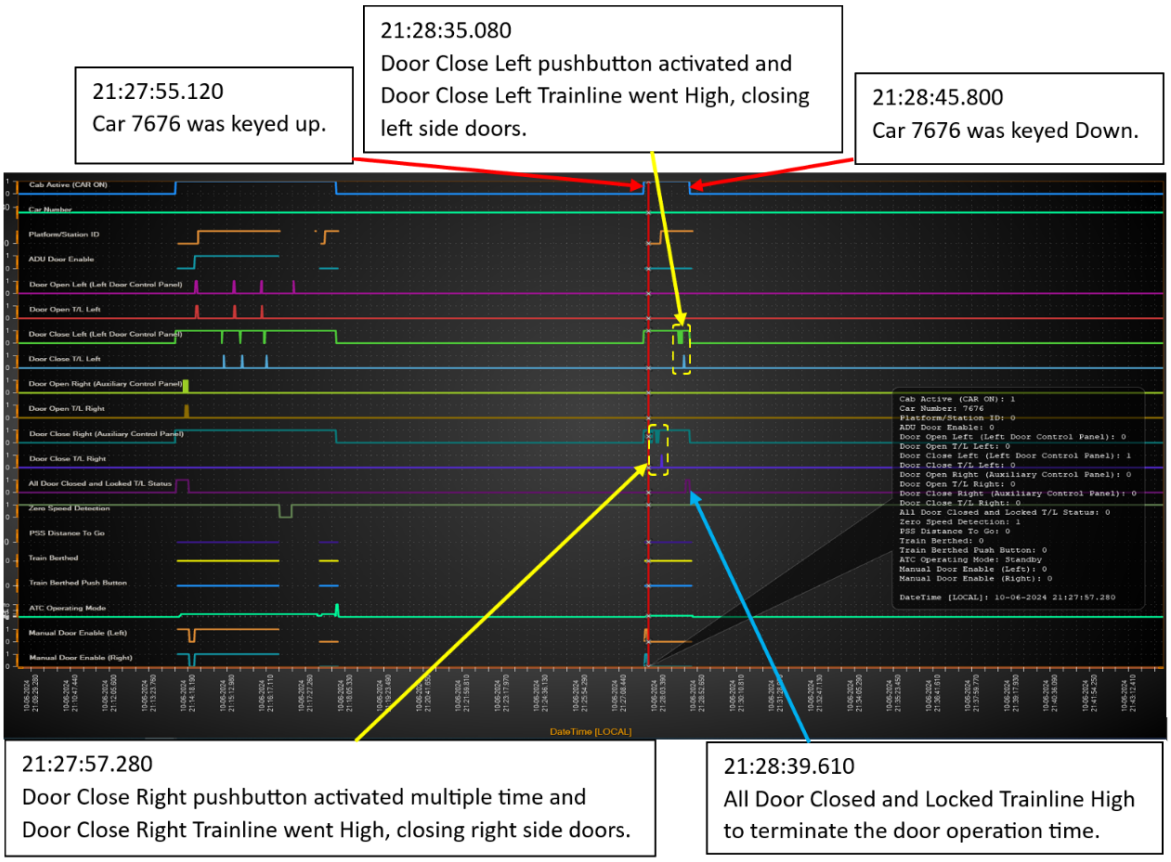


Figure 6 - 7354 Event Recorder Analysis 2 of 2.

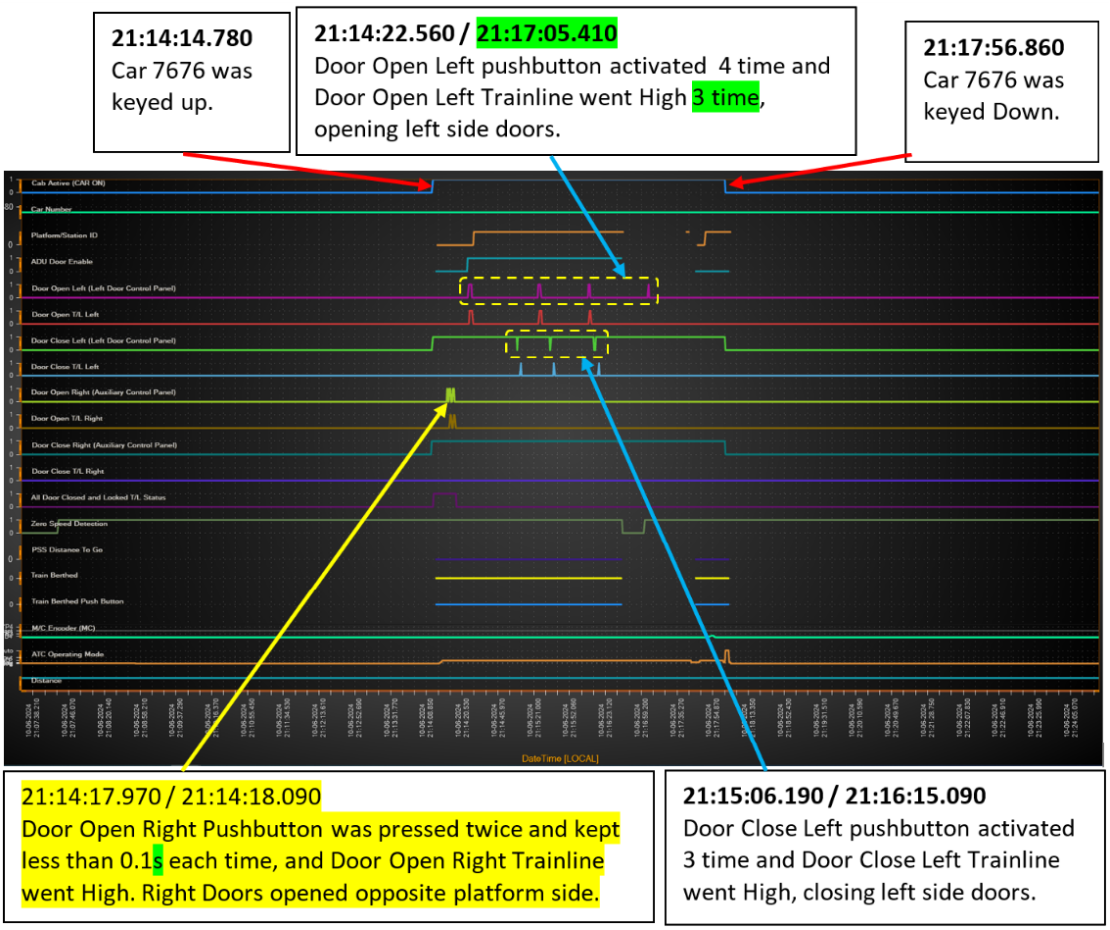


Figure 7 - 7676 Event Recorder Analysis 1 of 2.

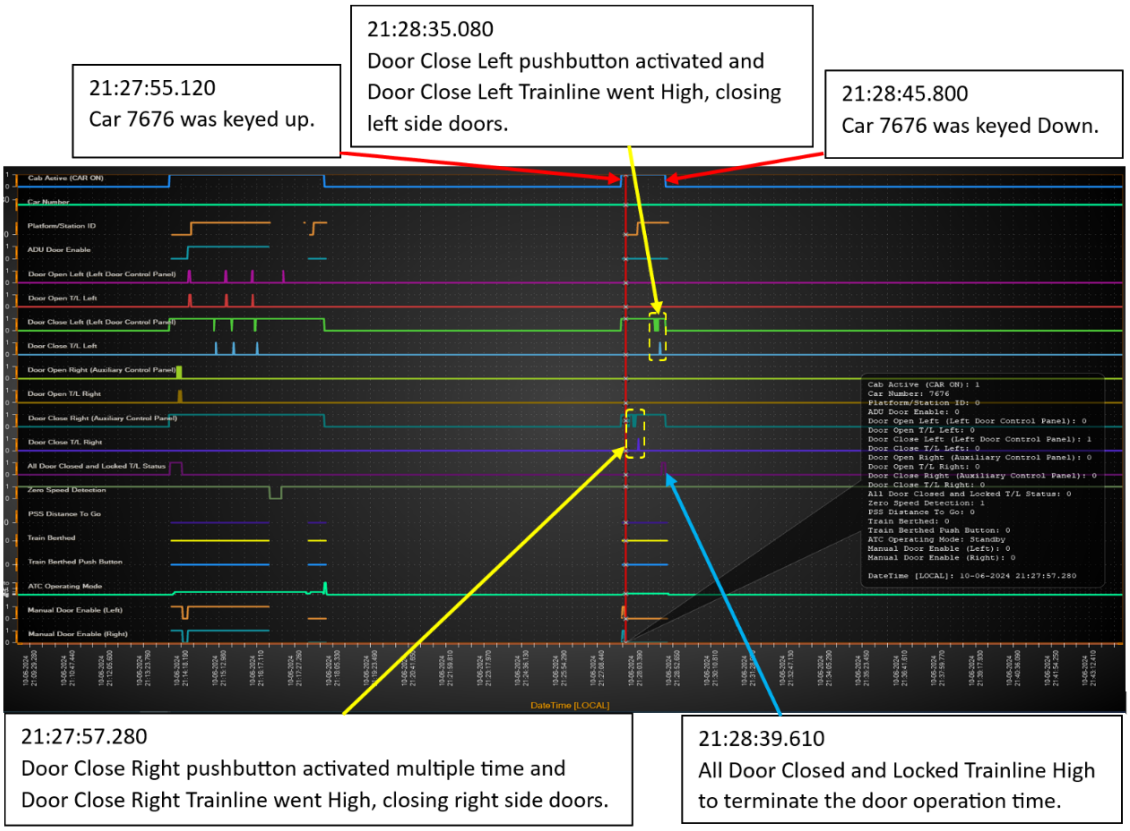


Figure 8 -7676 Event Recorder Analysis 2 of 2.

ROCS SPOTS REPORT

based on up-to-the-second operational performance data from the Rail Operations Control System

Current date/time: Thu Oct 10 13:01:30 2024

Select Platform: K08-1 **and/or Select ID:** Leave blank to remove criteria

and/or Select 4-digit car number: Leave blank to remove criteria

Select Date: Oct 6 2024 **Select Times (0-24HRS): From** 21:00 **To** 22:00

Generate Report

ID	Platform	length	dcode	Right door open	Right door close	dwell	Left door open	Left door close	dwell	Head Arrived	Tail cleared	cars	Headway door open to door open
750	K08-1	8	94	21:07:59	21:18:11	612	21:28:20	21:28:51	31	21:06:50	21:54:21	7676-7677.7583-7582.7258-7259.7355-7354	-

Figure 9 – ROCS SPOTS Report.

7676	VMDS	MAIN	10/7/2024	1:29:06	10/6/2024	21:29:06	EVENT	EVT001	CONTROL LOCK KEY ON	Reset	3	1000 '0000767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:28:16	10/6/2024	21:28:16	EVENT	EVT001	CONTROL LOCK KEY ON		3	0 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:18:16	10/6/2024	21:18:16	EVENT	EVT001	CONTROL LOCK KEY ON	Reset	3	1000 '0000767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:17:59	10/6/2024	21:17:59	ATC	ATC001	ATP FAIL	Reset	1	0 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:17:57	10/6/2024	21:17:57	ATC	ATC003	ATO FAULT	Reset	2	0 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:17:55	10/6/2024	21:17:55	ATC	ATC004	ATS FAULT	Reset	2	0 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:17:02	10/6/2024	21:17:02	C/B	C/B303	LV C/B: ATC	Reset	1	1000 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:17:02	10/6/2024	21:17:02	C/B	C/B304	LV C/B: ATCC	Reset	2	1000 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:16:51	10/6/2024	21:16:51	C/B	C/B303	LV C/B: ATC		1	923 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:16:51	10/6/2024	21:16:51	ATC	ATC004	ATS FAULT		2	923 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:16:51	10/6/2024	21:16:51	ATC	ATC003	ATO FAULT		2	923 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:16:51	10/6/2024	21:16:51	ATC	ATC001	ATP FAIL		1	923 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:16:50	10/6/2024	21:16:50	C/B	C/B304	LV C/B: ATCC		2	923 '7676767676777583758272587259735573547'
7676	VMDS	MAIN	10/7/2024	1:14:35	10/6/2024	21:14:35	EVENT	EVT001	CONTROL LOCK KEY ON		3	647 '7676767676777583758272587259735573547'

Figure 10 – VMDS Data Analysis.

Office of Rail Transportation (RTRA)
Adopted from RTRA report:

The Terminal Supervisor reported that RVO #2 opened the doors on the opposite side of the platform at Vienna Station. A review of the data reports confirmed that the Door Open Right Pushbutton was pressed twice, less than 0.1 seconds each time, causing right-side doors to open on the non-platform side.

RVO #2 reported in their statement that they were told to put the train on track 1 in service after RVO #1 had walked through it and verified it was clear of customers and was in the operator cab getting ready to depart with the train. They reported that they took over the train's operations and opened the doors on the platform side for the passengers to board. When they attempted to close the train doors, the signal lights over the door would not extinguish, and the yellow “brakes on” light remained illuminated. They recycled the ATC package as instructed by the Terminal Supervisor to fix the problem. They stated they were instructed to take the train on track 2 and place it in service to start their trip to New Carrollton.

In accordance with the Disciplinary Guidelines Matrix, RVO #2 received disciplinary action for the Serious Safety Violation.

Interview Findings and Written Statements
As part of the investigation launched into the event, SAFE interviewed two people. The interviews identified the following key findings associated with this event. The findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

RVO #2

- RVO #2 stated they placed the train on track 1 in service and were unable to get an all-door close.
- RVO #2 stated that the Terminal Supervisor instructed them to recycle the ATC package to close all the open train doors.
- RVO #2 stated that they were instructed to place the train on track 2 in service and continue operating to New Carrollton Station following the incident.

Terminal Supervisor

- The Terminal Supervisor stated they walked the platform and observed doors open on the non-platform side of the third car.
- The Terminal Supervisor stated that no door signal lights were illuminated on the train when the RVO’s changed off.

Weather

On October 6, 2024, at the time of the incident, NOAA recorded the temperature as 70°F, with fair skies and winds of 10 mph, 66%. The weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Vienna, Virginia)

Related Rules and Procedures

Metrorail Operating Rulebook (MOR)

8.18 Door Operation

8.18.2 In revenue service, Rail Vehicle Operators shall not manually operate any OPEN DOORS control except the crew key switch while any side doors of the train are outside the limits of a station platform, except when directed by the Rail Traffic Controller.

8.18.3 In revenue service, when the train is otherwise within the limits of a station platform, Rail Vehicle Operators shall not manually OPEN DOORS control on the side of the train opposite the platform.

8.18.4 In the event train doors are opened outside the platform limits or on the side of opposite the platform, Rail Vehicle Operators shall close doors, notify the Rail Traffic Controller, and conduct a ground walk around inspection. The Rail Traffic Controller will determine if the train is to be taken out of service and if it is safe to discharge customers at that station.

18.1 General Safety Rules

18.1.4 Employees shall always maintain situational awareness of their surroundings.

Standard Operating Procedure (SOP) 40 *Procedure for Platform Berthing, Station Servicing and Overruns.*

6.2 Door Opening Procedures

6.2.2 When train is operating in Mode 2 and the Door Mode Selector is in the Auto/Manual position, to automatically open the doors, the Rail Vehicle Operator shall:

6.2.2.1 Depress the Train Berth pushbutton at three (3) miles per hour (mph) or less; and

6.2.2.2 Properly berth the train on the platform.

Human Factors

Fatigue

Evidence of Fatigue

Rail Vehicle Operator #2

A Safety Investigator evaluated conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no sign of fatigue. The 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. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

Rail Vehicle Operator #2

A Safety Investigator evaluated incident data for fatigue risk factors. Risk factors for fatigue were present. The incident time of day did not suggest an increased risk of fatigue-related impairment. The employee reported some variation in the sleep schedule in the days leading up to the incident. The employee worked the afternoon shift in the days leading up to the incident. The employee was awake for eleven hours and twenty-four minutes at the time of the incident. The employee reported nine hours of sleep in the 24 hours preceding the incident. The off-duty period was twelve hours and fifteen minutes, providing an opportunity for 7-9 hours of sleep. This was more than the employee's usual workday sleep durations. The employee reported no issues with sleep.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that RVO #2 complied with and was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Findings

- RVO #1 operated the eight-car train into Vienna Station, placed the train out of service, closed all the train doors, and walked through the train to car 7676.
- RVO #2 placed the train in service after boarding the train through the crew door.
- RVO #2 depressed the Right-Side Door Open button after keying up the train.
- RVO #2 reported to the Terminal Supervisor that they were unable to close all doors and were instructed to recycle the ATC package in car 7676.
- Recycling the ATC package only closed the train doors in cars 7676 & 7677.
- RVO #2 operated from Vienna Station to New Carrollton Station following the improper door operation event before being removed from service for post-incident testing.

Immediate Mitigation to Prevent Recurrence

- Train ID 923 was removed from service for post-incident inspection.
- Rail Traffic Controllers are making hourly announcements to remind RVOs to operate in Automatic Doors Open (ADO) as required. If the doors must be manually operated, the RVO must ensure the train is properly berthed and utilize the point-and-call method before performing door operations on the platform side only.
- RTRA redistributed a Personnel Notice reminding all Operators to utilize the point-and-call method to reduce and prevent errors while performing tasks.
- RTRA increased documented conversations with staff, stressing the importance of reporting incidents when they occur.
- Safety developed an RVO Outreach Program to increase general rule compliance conversations regarding doors opening on the platform's opposite side.

Probable Cause Statement

The probable cause of the Improper Door Operation on October 6, 2024, at Vienna Station was RVO #2 rushing to place the train in revenue service. A contributing factor was RVO#2's failure to place their head out the operator's cab window and utilize the point-and-call method to verify the presence of the platform before operating the train doors.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
120420_SAFECAPS_RTRA_001	Rail Vehicle Operator #2 attends refresher training with the Rail Operation Quality Training (ROQT).	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.

Rail Vehicle Operator #2

The RVO has been a WMATA employee since November 12, 2019, and an RVO since July 31, 2023. It was last certified as an RVO on July 31, 2023, and has no safety violations in its record.

During a formal interview, RVO #2 stated that they were instructed to place the train on track 1 in service. RVO #1 had just placed that train out of service and was walking through to the trailing end (Railcar 7676). They informed RVO #1 that they were putting the train in service and keyed the train up. Then, they depressed the keypad and went to open the train doors on the platform side (left).

The RVO #2 stated they did not remember depressing the Right-Side Door Open button upon keying the train up. They said they attempted to close the doors on the platform side and noticed the door signal lights were still illuminated. They notified the Terminal Supervisor, who exited the terminal and instructed them to recycle the ATC package while standing at the operator's cab window. After recycling the system, the door signal lights remained illuminated. They depressed the Left-Side Door Close button again to no avail.

The Terminal Supervisor walked the platform and observed that the train doors were open on the off-platform side of the train. The Terminal Supervisor then instructed RVO #2 to take the train on track 2.

The RVO #2 stated they placed the train on track 2 in service and operated it to New Carrollton Station, where it was removed from service.

Terminal Supervisor

The Terminal Supervisor has been a WMATA employee for 20 years and worked as a Utility Rail Operations Supervisor for three years. The Terminal Supervisor was certified in Terminal Operations on April 15, 2022.

During a formal interview, the Terminal Supervisor stated that RVO #1 brought the train into the platform at Vienna Station, and they instructed them to take the train out of service, walk through it to make certain it was clear of customers, and prepare to take it to West Falls Church rail yard.

The Terminal Supervisor stated they walked onto the platform and informed RVO #2, who was waiting for their train to arrive, to place the train on track 1 in-service due to their train not arriving on time. RVO #1 keyed themselves off the train, and RVO #2 keyed themselves onto the train. The Terminal Supervisor stated that when the operator change-off occurred, there were no door signal lights illuminated.

The Terminal Supervisor said they returned to the block and opened the door. They then heard RVO #2 yell out that they were unable to get all the train doors to close. When they walked onto

the platform, they observed door signal lights illuminated along the train. They instructed RVO #2 to recycle the ATC Power Supply and ATC System circuit breakers and began walking alongside the train on the platform.

The Terminal Supervisor stated they observed the train doors open on the non-platform side of the train at the third car and returned to the blockhouse to retrieve their PPE. They notified the MICC that the train on the platform had a door open on the non-platform side. They walked the remainder of the 8-car consist and observed that the doors of the trailing six of eight cars were open on the non-platform side of the train.

The Terminal Supervisor stated that after updating the MICC of the incident, they were instructed to remove RVO #1 from service. They completed an exterior inspection of the train and verified that no customers exited onto the roadway.

The Terminal Supervisor stated they instructed RVO #2 to retrieve the train that arrived on track 2 and place it in-service towards New Carrollton.

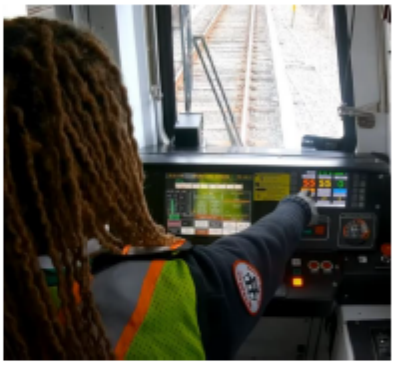
Appendix B – RTRA Operations Personnel Notice (RTRA-603-161-00)

RTRA OPERATIONS PERSONNEL NOTICE

Wednesday, June 12, 2024

RTRA-603-161-00

'Point and Call' Training Required for All Operating Personnel



To assist rail vehicle operators with staying focused and attentive, while performing critical tasks, Rail Transportation has adopted the **'Point and Call'** method. By following a systematic process of pointing and verbalizing, rail vehicle operators shall ensure that correct actions are taken at critical process points. Moreover, pointing and calling keeps rail vehicle operators focused on the task at hand and seeks to alleviate major incidents and violations by actively being aware of what is next, instead of passively operating.

Please be advised, 'Point and Call' training will be required for all operating personnel immediately. Therefore, today **Wednesday, June 12th**, Division Management will begin enrolling operating personnel in the 'Point and Call' CBT. All operating personnel are expected to have completed the training by **Friday, August 2nd**. For reference, the course code in ELM is: **OPRROPOINTCALL-20240607CBT**.

'Point and Call' training will be incorporated into all rail vehicle operator training to include, initial and refresher training. Also, Rail Operations Supervisors and oversight staff will be responsible for monitoring compliance during normal spot checks. Additionally, Division Management will be expected to monitor compliance as a part of any applicable post-incident investigation.

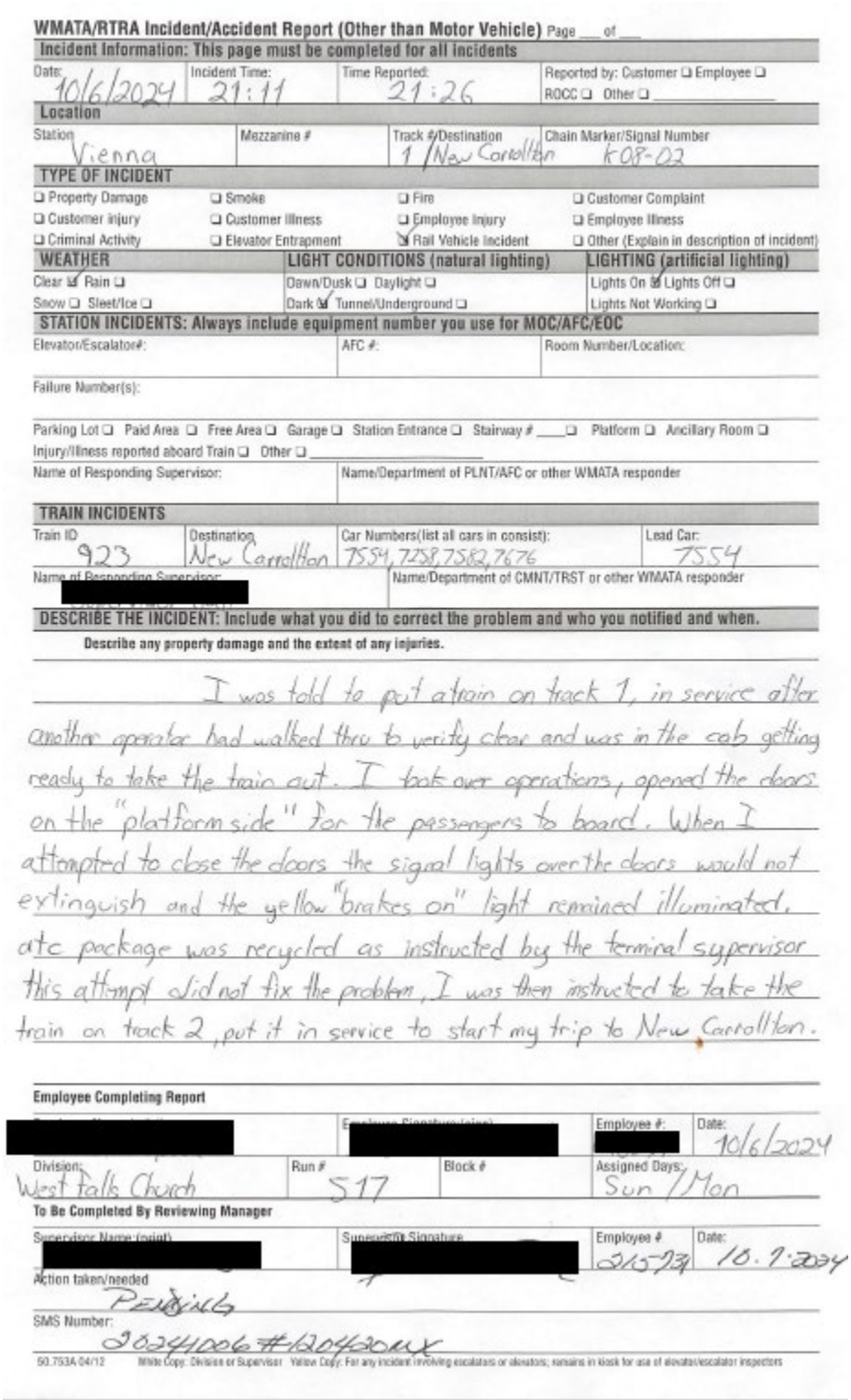
If there are any questions regarding the contents within this notice, please see a supervisor and/or Division Manager. Thank you and please be safe.

To report a potential safety risk, please scan the QR code or use this link: tinyurl.com/ReportRisks

Electronic devices shall only be used in designated areas and in accordance with the WMATA Electronic Device Policy.

Figure 11 - RTRA Operations Personnel Notice "Point and Call".

Appendix C – RVO #2 Incident Report (redacted)



WMATA/RTRA Incident/Accident Report (Other than Motor Vehicle) Page ___ of ___

Incident Information: This page must be completed for all incidents

Date	Incident Time	Time Reported	Reported by: Customer ❑ Employee ❑ ROCC ❑ Other ❑
10/6/2024	21:11	21:26	

Location

Station	Mezzanine #	Track #/Destination	Chain Marker/Signal Number
Vienna		1 / New Carrollton	K08-02

TYPE OF INCIDENT

❑ Property Damage	❑ Smoke	❑ Fire	❑ Customer Complaint
❑ Customer injury	❑ Customer Illness	❑ Employee Injury	❑ Employee Illness
❑ Criminal Activity	❑ Elevator Entrapment	☑ Rail Vehicle Incident	❑ Other (Explain in description of incident)

WEATHER	LIGHT CONDITIONS (natural lighting)	LIGHTING (artificial lighting)
Clear ☑ Rain ❑	Dawn/Dusk ❑ Daylight ❑	Lights On ☑ Lights Off ❑
Snow ❑ Sleet/Ice ❑	Dark ☑ Tunnel/Underground ❑	Lights Not Working ❑

STATION INCIDENTS: Always include equipment number you use for MOC/AFC/EOC

Elevator/Escalator#:	AFC #:	Room Number/Location:

Failure Number(s):

Parking Lot ❑ Paid Area ❑ Free Area ❑ Garage ❑ Station Entrance ❑ Stairway # ___ ❑ Platform ❑ Ancillary Room ❑
Injury/Illness reported aboard Train ❑ Other ❑ _____

Name of Responding Supervisor:	Name/Department of PLNT/AFC or other WMATA responder

TRAIN INCIDENTS

Train ID	Destination	Car Numbers(list all cars in consist):	Lead Car:
923	New Carrollton	7554, 7258, 7582, 7676	7554

Name of Responding Supervisor:	Name/Department of CMNT/TRST or other WMATA responder
[redacted]	

DESCRIBE THE INCIDENT: Include what you did to correct the problem and who you notified and when.

Describe any property damage and the extent of any injuries.

I was told to put a train on track 1, in service after another operator had walked thru to verify clear and was in the cab getting ready to take the train out. I took over operations, opened the doors on the "platform side" for the passengers to board. When I attempted to close the doors the signal lights over the doors would not extinguish and the yellow "brakes on" light remained illuminated. atc package was recycled as instructed by the terminal supervisor this attempt did not fix the problem, I was then instructed to take the train on track 2, put it in service to start my trip to New Carrollton.

Employee Completing Report

[redacted]	[redacted]	Employee #: [redacted]	Date: 10/6/2024

Division:	Run #	Block #	Assigned Days:
West Falls Church	517		Sun / Mon

To Be Completed By Reviewing Manager

Supervisor Name (print): [redacted]	Supervisor Signature: [redacted]	Employee #	Date:
		215734	10.7.2024

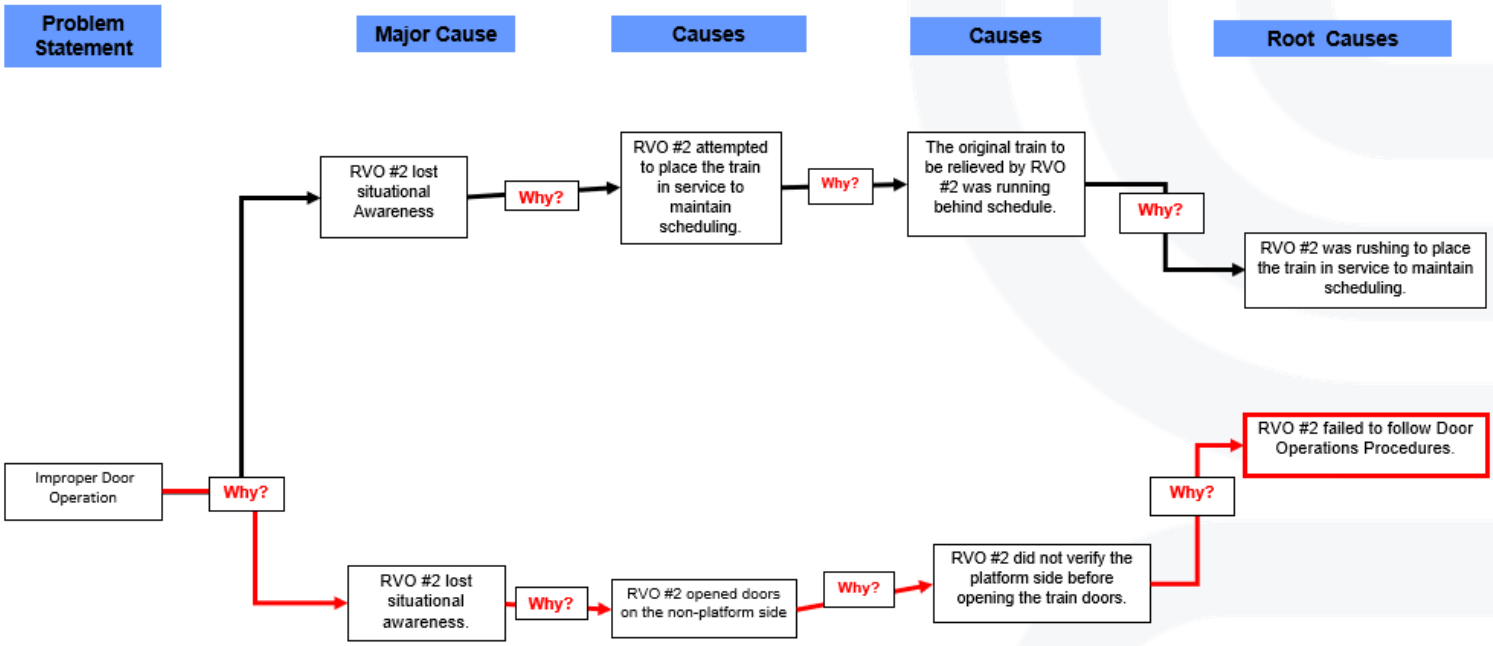
Action taken/needed
PENDING

SMS Number:
20241006#120430MX

50.753A 04/12 White Copy: Division or Supervisor Yellow Copy: For any incident involving escalators or elevators; remains in kiosk for use of elevator/escalator inspectors

Figure 12 - RVO #2 redacted incident report.

Appendix D – Why-Tree Analysis



Root Cause Analysis

7

E24796 – Improper Door Operation – Vienna Station

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

FINAL REPORT OF INVESTIGATION A&I E24792

Date of Event:	October 3, 2024
Type of Event:	O-15(a): Improper Door Operation
Incident Time:	20:07 hours
Location:	Fort Totten Station, Lower level, Track 2
Time and How received by SAFE:	20:10 hours Safety Information Official
WMSC Notification Time:	21:01 hours
Responding Safety Officers:	None
Rail Vehicle:	Train 504 (L7362-7363x7636-7637x7589-7588T)
Injuries:	None
Damage:	None
Emergency Responders:	None
SMS I/A Number	20241003#120356MX

October 3, 2024
Table of Contents

Abbreviations and Acronyms

ADO	Automatic Door Operation
AIMS	Advanced Information Management System
AOM	Assistant Operations Manager
ARS	Audio Recording System
CCTV	Closed-Circuit Television
CMOR	Office of the Chief Mechanical Officer
MICC	Metro Integrated Command and Communications Center
MOR	Metrorail Operating Rulebook
NOAA	National Oceanic and Atmospheric Administration
OM	Operations Manager
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
RVO	Rail Vehicle Operator
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 Thursday, October 3, 2024, at 20:06 hours, Train ID 504 (L7362-7363x7636-7637x7589-7588T), a Green Line, six-car consist, entered the platform limits of Fort Totten Station, lower level on track 2. The train berth button was activated, initiating the Automatic Door Operation (ADO) as the train approached the 8-car marker. At 20:07 hours, the train stopped at the 8-car marker, and the train doors opened. The Rail Vehicle Operator (RVO) looked out from the left-side cab window to manually close the train doors. The RVO closed the train doors, returned to the console, and noticed the train did not display speed commands.

The Closed-circuit television (CCTV) revealed that at 20:07 hours, the train doors were opened on the non-platform side. Seconds later, the doors on the non-platform side were closed.

At 20:08 hours, the RVO reported to the Metro Integrated Command and Communications Center (MICC) Radio Rail Traffic Controller (RTC) that the train doors were opened on the non-platform side. The Radio RTC instructed the RVO to offload the train and conduct a ground walkaround.

At 20:10 hours, the Button RTC informed the Assistant Operations Manager (AOM) of the event. At 20:12 hours, the Radio RTC instructed an Office of Rail Transportation (RTRA) Supervisor to respond to Fort Totten Station. At 20:17 hours, trains began to single-track between Fort Totten and Georgia Avenue Stations.

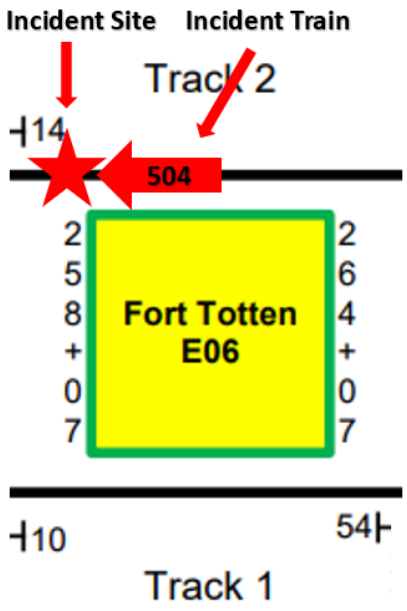
At 20:18 hours, the RTRA Supervisor arrived at Fort Totten Station and took of the operation of Train ID 504.

The probable cause of the Improper Door Operation event at Fort Totten Station on October 3, 2024, was the RVO's failure to follow station servicing procedures when they closed the train doors before verifying that the train displayed speed commands. Rushing also contributed to the RVO's loss of situational awareness.

Incident Site

Fort Totten Station, Lower Level, Track 2. This is a multi-level, inside station with a center platform between chain markers (CM) 1/2 258+07 and 264+07.

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 video and 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:
  - RVO – Train ID 504
- 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 Incident Report
  - RVO's 30-Day Work History

- RVO Certification
- RTRA Managerial Incident Investigation Report
- RTRA Supervisor's Written Statement
- Metro Integrated Command and Communications Center (MICC) 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 Diagnostic System (VMDS)

Investigation

On Thursday, October 3, 2024, at 20:06 hours, Train ID 504 (L7362-7363x7636-7637x7589-7588T), a Green Line, six-car consist, entered the platform limits of Fort Totten Station, track 2. The train berth button was activated, which initiated the ADO as the train approached the 8-car marker.

At 20:07 hours, the train stopped at the 8-car marker of Fort Totten Station and the train doors opened on the platform side. The Rail Vehicle Operator (RVO) looked out from the left-side cab window to manually close the train doors. The RVO closed the train doors, returned to the console, and noticed the train did not display speed commands.

The CCTV revealed that at 20:07 hours, the train doors were opened on the non-platform side, and then the doors on the non-platform side were closed.

At 20:08 hours, the RVO reported to the MICC Radio RTC that the train doors were opened on the non-platform side. The Radio RTC instructed the RVO to offload the train and conduct a ground walkaround.

At 20:10 hours, the Radio RTC requested an RTRA Supervisor to report to Fort Totten Station, and the Button RTC reported the event to the MICC AOM. The MICC Operations Manager (OM) advised the RTRA Division Manager regarding the event.

At 20:11 hours, the Radio RTC instructed the RVO to open the platform doors and offload the train. At 20:12 hours, passengers began to exit the train. At 20:14 hours, the RVO reported completing the ground walk around and offloading the train. The Radio RTC instructed RVO to make change the Train ID from 504 to 704.

At 20:17 hours, the RTRA Supervisor arrived and took over operating the train at Fort Totten Station.

At 20:18 hours, the Radio RTC instructed Train ID 506 to pick up Train ID 504 customers at Fort Totten Station, track 1. The RTRA Supervisor advised RTC that they arrived at Fort Totten Station.

At 20:20 hours, Train ID 506 reported servicing Fort Totten Station and was advised of an absolute block to Georgia Avenue Station.

At 20:22 hours, the RTRA Supervisor advised the RTC that they were ready to depart with Train ID 704. The RTC granted Train ID 704 permission to continue non-revenue to Branch Avenue Yard.

At 20:23 hours, Train ID 704 departed Fort Totten Station. At 20:25 hours, the RTC announced to resume normal operation.

Chronological Event Timeline

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

Time	Description
20:07:03 hours	Train ID 504 came to a complete stop two feet short of the 8-car marker, Fort Totten Station, track 2. [IIT Data]
20:07:06 hours	The platform side doors opened. [IIT Data]
20:07:15 hours	RVO: Looked out from the cab window and noticed the platform side doors were open. [CCTV]
20:07:30 hours	Closed platform side doors. [CCTV]
20:07:37 hours	The non-platform side doors were opened. [IIT Data]
20:07:42 hours	The door lights were illuminated but the platform side doors were not open. [CCTV]
20:07:48 hours	The non-platform side doors closed. [IIT Data]
20:08:35 hours	RVO reported opening doors on the wrong side, Fort Totten, track 2. Radio RTC instructed RVO to key down and conduct a ground walk around. [Radio, OPS 3]
20:09:10 hours	RVO: Reported keyed down, conducting a walk around. RTC: Acknowledged. [Radio, OPS 3]
20:10:03 hours	Button RTC advised MICC OM regarding the event and requested a Rail Supervisor to contact Central. [Phone, Rail 2]
20:10:10 hours	MICC OM: Contacted Division Manager regarding the event. [Phone, Rail 1]
20:11:04 hours	RVO confirmed with Radio RTC that the train was properly berthed. Radio RTC instructed RVO to open the platform side doors and offload the train. [Radio, OPS 3]
20:12:09 hours	Passengers started to offload the train. [CCTV]
20:12:13 hours	Radio RTC requested RTRA Supervisor's presence at Fort Totten Station; RTRA Supervisor acknowledged they were enroute. [Radio, OPS 3]
20:14:32 hours	RVO reported completing the walk around and offloaded the train. [Radio, OPS 3]
20:14:45 hours	Radio RTC instructed RVO to change their train ID from 504 to 704 and to make their destination for Branch Ave. [Radio, OPS 3]
20:17:22 hours	Radio RTC announced single tracking and Train ID 506 will be the first train to single track between Fort Totten and Georgia Ave Stations. [Radio, OPS 3]
20:17:32 hours	Train ID 506 acknowledged. [Radio, OPS 3]
20:18:04 hours	RTC advised Train ID 506 to pick up customers at Fort Totten, track 1. [Radio, OPS 3]
20:18:06 hours	RTRA Supervisor advised Radio RTC of their arrival at Fort Totten. [Radio, OPS 3]
20:20:48 hours	Train ID 506 reported servicing Fort Totten and was given an absolute block to Georgia Avenue Station. [Radio, OPS 3]

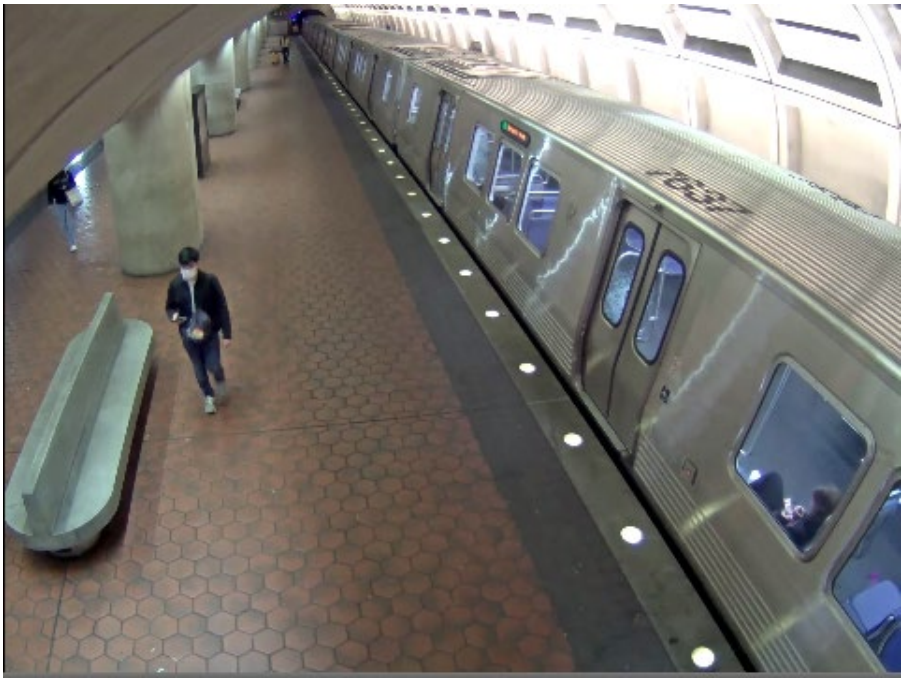
Time	Description
20:22:30 hours	RTRA Supervisor advised RTC they were ready to depart with Train ID 704. [Radio, OPS 3]
20:23:18 hours	Radio RTC authorized Train ID 704 a permissive block on track 2 to Georgia Ave, heading to Branch Ave Yard. [Radio, OPS 3]
20:23:54 hours	Train ID 704 (L7362) departed Fort Totten Station, track 2. [CCTV]
20:25:26 hours	Radio RTC announced to resume normal operation and authorized Train ID 508 to service Fort Totten Station, track 2. [Radio, OPS 3]

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

Closed-Circuit Television (CCTV)

20:07:03 hours - Train ID 504 made a complete stop at the Fort Totten Station 8-car marker, Track 2.

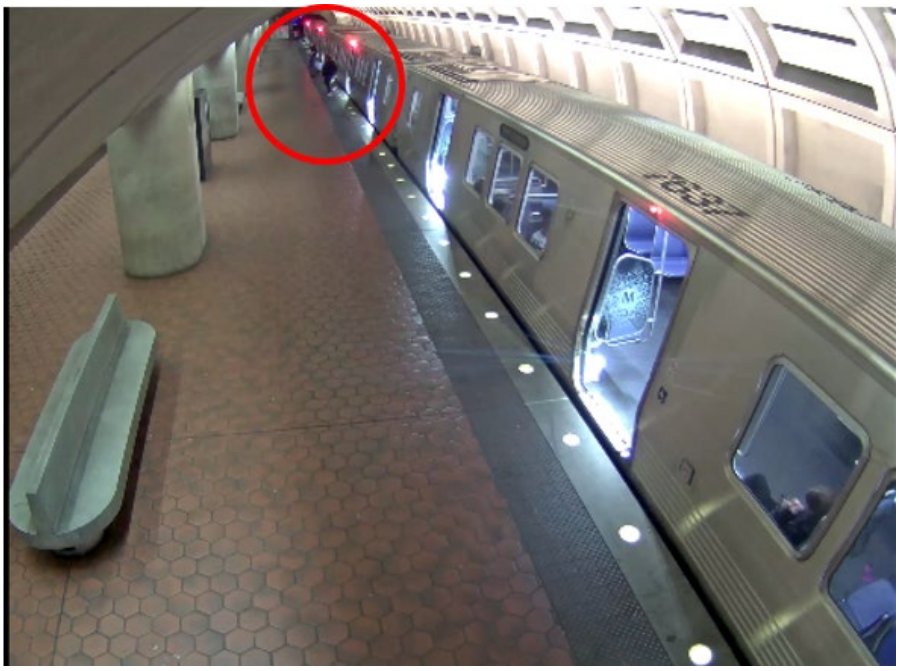
20:07:15 hours – The RVO looked out from the cab window according to station servicing procedures.



20:07:30 hours – Closed platform side doors.

20:07:42 hours - the door lights were illuminated but the platform side doors were not open. One of Train ID 504 car number is 7637.

20:07:56 hours - The door lights were not illuminated, and the platform side doors remained closed.



20:12:09 hours - passengers started to deboard the train.

20:23:54 hours - Train ID 704 (L7362) departed Fort Totten Station, track 2.

The Office of Chief Mechanical Officer / Vehicle Monitoring and Diagnostic System (VMDS)
Adopted from the CMOR/IIT report.

The CMOR/IIT determined that based on the review of Vehicle Monitoring and Diagnostic System (VMDS) and Event Records (ER) data, the train operated as designed and found no detects or operation of the train that contributed to the event. The train berth button was depressed, and the train came to a complete stop two feet before the 8-car marker at Fort Totten Station. The train berthed signal energized, indicating the train was positioned within platform limits.

After coming to a complete stop, the platform side doors were signaled to open from the Automatic Train Control (ATC) system to open the platform side doors. The platform side Door Close button was activated to close the doors. Shortly thereafter, the right-side Door Open pushbutton was activated, opening right-side doors opposite of the platform side. The right-side Door Close pushbutton then activated, closing right side doors.

See timeline of events below:

Time	Description of Events
20:06:59.900	Train ID504 train berth pushbutton depressed as train approached the 8-car marker at Ft. Totten Station, Track #2. Train speed was 0.8 MPH.
20:07:01.340	Train ID504 came to a complete stop 2 ft. before the 8-Car marker at Ft. Totten Station. Train berth signal Goes HIGH.
20:07:06.770	Door Open Left trainline signal energized from ATC and Left-side passengers Open on the platform side.
20:07:19.500	Door Close Left Pushbutton is depressed, and Left Doors begin to close.
20:07:24.310	All Doors Closed and Locked Trainline goes HIGH, indicating all doors closed and locked .
20:07:37.010	Door Open Right Pushbutton is activated and Door Open Right Trainline goes HIGH, opening Right-side doors opposite of the platform side.
20:07:48.280	Right Door Close pushbutton activated closing Right Side Doors.
20:07:53.070	All Doors Closed and Locked Trainline goes HIGH, indicating all doors closed and locked .
20:09:50.570	Car 7362 keyed down

Table 1 - Train ID 504 VMDS Sequence of Events.

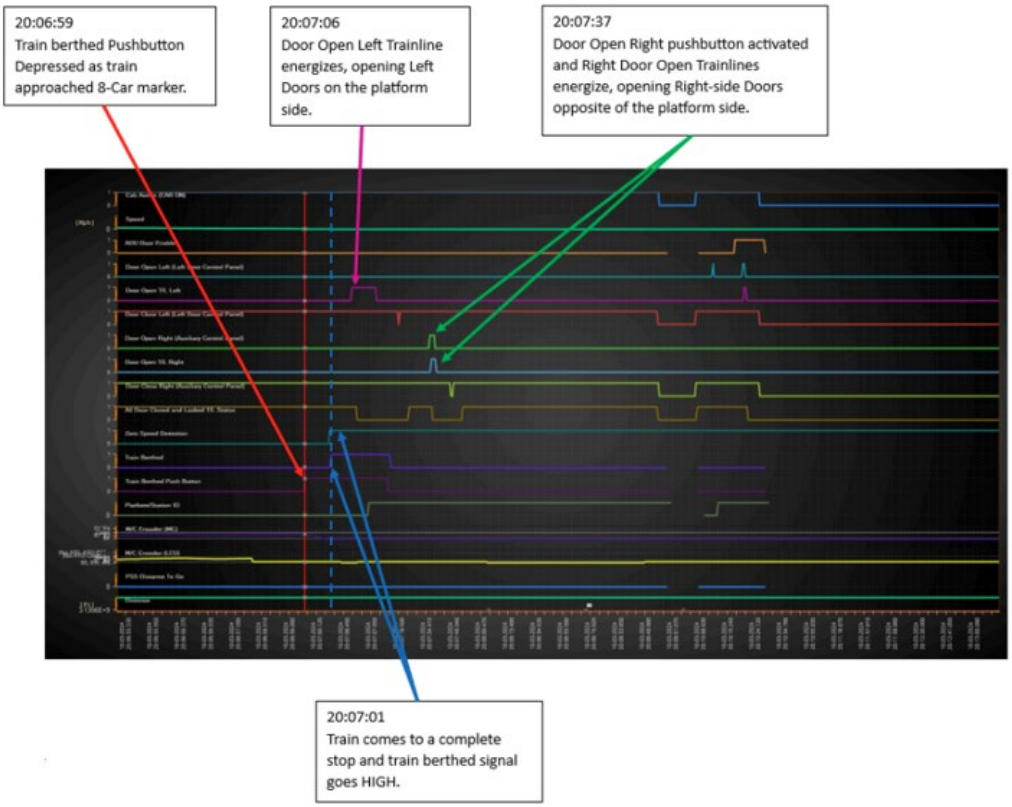


Image 1 – Lead Car 7362 ER Data

The RVO started their employment with WMATA on March 5, 2018, and certified as an RVO on June 1, 2023. The RVO was last certified on March 27, 2024. The RTRA reported no reported discrepancies with RVO's performance and/or fitness for duty. The RVO worked a total of 64 hours within the last seven (7) days and 50 hours overtime within the past 2 weeks.

Interview Findings and Written Statements

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

RVO

- The RVO stated they berthed the train at Fort Totten Station and looked out the cab window.
- The platform side doors opened automatically, and the RVO manually closed the doors.
- The RVO stated they lost speed commands, so they thought they would open doors again.
- The RVO stated the opposite side doors of the platform were opened and they manually closed the doors.
- The RVO stated they could not say that they did not open the "wrong side" doors but could not explain what happened. The RVO reported the incident to Central.
- The RVO explained that at the time of the incident, they were moving "fast" and that they needed to "slow down."
- The RVO experienced no radio communications issue and no mechanical issues with the train.

RTRA Supervisor (written report)

- The supervisor transported RVO for post-incident testing.
- The supervisor stated RVO said they honestly "wasn't sure" if they opened the non-platform side doors.

Weather

On October 3, 2024, the National Oceanic and Atmospheric Administration (NOAA) recorded the average temperature as 73°F, winds speed at 2.8 mph, and relative humidity at 75 percent average. Weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Washington, DC.

Related Rules and Procedures

The Metrorail Operating Rulebook (MOR), in part, states the following:

Metrorail Operating Rulebook

1.1.3 Guiding Safety Principles

1.1.3 Employees shall not permit unnecessary conversation, reading, lounging or any other action or condition of mind to divert their attention from the safe and performance of duty.

8.18 Door Operation

8.18.3 In revenue service, when the train is otherwise within the limits of a station platform, Rail Vehicle Operators shall not manually operate the OPEN DOORS control on the side of the train opposite the platform.

Standard Operating Procedure (SOP) 40, Procedure for Platform Berthing, Station Servicing and Overruns, in part, states the following:

6.2 Door Opening Procedures

6.2.3 When the Door Mode Selector is in the Manual/Manual position, the Rail Vehicle Operator shall:

6.2.3.1 Use extreme caution before depressing the Open Doors pushbutton;

6.2.3.2 Ensure the train is properly berthed on the platform;

6.2.3.3 Verify the platform side of the train by placing their head out of the cab window and first look and identify the platform;

6.2.3.4 Look at the doors on the platform side of the train to observe any activity in front of the doors, with hands to their side for five (5) seconds;

6.2.3.5 Depress the Open Doors pushbutton on the platform side of the train;

6.2.3.6 (Additional step only for 7000 Series Fleet) Depress the console 'Ok' pushbutton on the Aspect Display Unit;

Human Factors

Fatigue

Signs and Symptoms of Fatigue

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the incident was not available to ascertain whether symptoms of fatigue were present. 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

Incident data was evaluated for fatigue risk factors. There were no major risk factors for fatigue identified. The incident time of day (20:07 hours) does not suggest an increased risk of fatigue-related impairment. The employee worked day and night shifts in the days leading up to the incident. The employee reported a total of 8 and a half hours of sleep in the last sleep period

preceding the incident and was awake for 9.1 hours at the time of the incident. The off-duty period preceding the incident was 11.6 hours, which provided the opportunity for 7-9 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 RVO complied with the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Findings

- Train ID 504 train berth button was depressed as the train approached the 8-car marker at Fort Totten Statin. The train berthed approximately two feet short of the 8-car marker.
- The platform side doors opened automatically, and the RVO closed the doors.
- The RVO depressed the Door Open button on the right panel that opened doors on the opposite side of the platform and then depressed the Door Close button, closing the doors.
- The opposite side doors of the platform were open for approximately 14 seconds.
- The RVO reported the “wrong side” doors were opened to the RTC and conducted a ground walkaround as instructed.

Immediate Mitigation to Prevent Recurrence

- 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 Radio RTC dispatched a Rail Supervisor to relieve the Rail Vehicle Operator from duty for post-incident testing.
- In accordance with the Office of the Chief Mechanical Officer CMOR-IIT Operations Administrative Policy 102.06, the MICC promptly removed Train ID 504 from revenue service for post-incident investigative measures. This action adhered to the Rail Vehicle Event Investigation Policy, ensuring a comprehensive incident examination.

Probable Cause Statement

The probable cause of the Improper Door Operation event at Fort Totten Station on October 3, 2024, was the RVO’s failure to follow station servicing procedures when they closed the train doors before verifying that the train displayed speed commands. Rushing also contributed to the RVO’s loss of situational awareness.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
120356_SAFECAPS_RTRA_001	The Rail Vehicle Operator to complete refresher training with an emphasis on proper door operations.	RTRA SRC	Completed

Appendices

Appendix A – Interview Summary

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.

The RVO is a WMATA employee with approximately six years of service and have been in their current position since June 2023. The RVO is assigned to the Greenbelt Division. The RVO stated that they hold an RWP Level 2 Certification, expiring in December 2024. The RVO responded to the interview intake questions, reporting no sleep/fatigue issues. They explained they were on a "board" shift working various work hours.

The RVO stated that at the time of the incident, they experienced no radio communications issue and no mechanical issues with the train. The RVO explained they were familiar with the 7k series train operations with proper training and door operation procedures.

The RVO stated that just before the incident, they berthed the train at Fort Totten Station and looked out the cab window. The RVO saw the platform side doors were open and then closed the doors. The RVO stated they lost speed commands, so they thought they would open and close the doors again.

The RVO explained they did not know what or how it happened, but they noticed the doors on opposite side of the platform were opened. The RVO manually closed the doors. The RVO reported the incident to Central. Central instructed the RVO to conduct a ground walk-around and to make an announcement to offload their train. The RVO stated they could not say that they did not open the wrong side doors but could not explain what happened. The RVO stated they thought to themselves, "Did I open the doors?"

The RVO stated that prior to the incident, they experienced one time when the ADO did not work at College Park Station which they reported to Central. The RVO explained that "normally" the ADO did not work at Eisenhower and College Park Stations, track 1. The RVO added that sometimes the ADO did not work at L'Enfant Plaza, track 1. During those instances, they received instruction from Central to open the platform side doors manually. In addition, the RVO reported instances of no speed commands to Central.

The RVO was asked if they could have done anything differently involving the incident. The RVO stated that they were moving "fast," so they need to "slow down."

Appendix B – Certification

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Name: [redacted]	Emp.No: [redacted]	Division: Rail Training	Date: 6-1-2023

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
MSRPH version #:	92 %	4-28-2023
TVOIM/TOIM	83 %	4-28-2023
Supervisor Combination	%	
Practical attempt #: 1st	QL- 1	6-1-2023

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

Comments

Signatures:	Date:
Employee: [redacted]	6.1.23
Examiner: [redacted]	6-1-2023

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

Training Certification - Page 1 of 4

[redacted]

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp No.: [redacted] Date: 6-1-2023

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level score of 2 or 3*)
I. Preparation for Service		Cars Used: 7448 7487 7034 7159
1. Exterior Inspection	1	(7034) Barrier (7035) BCO (7159) Rotary Drum
2. Interior Inspection - Trailing Cab	1	(7034) Horn C/O
3. Interior Inspection - Each Car	1	(7159) Door Valance
4. Interior Inspection – Oper. Cab	1	(7158) Tail Marker
5. Rolling Test / Rolling Brake Test	1	
		Time Allotted: 35:00 / Actual Time: 35:00 1008-1043
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: Twanbrook Time Allotted: 02:00 / Actual Time: 3:03
11. Manual Route Selection	1	Location: A15 06
12. EV Shutoff	1	Time Allotted: 00:30 (1:00) / Actual Time: :
III. Yard Operation		
13. Communications	1	
14. Yard Movements	1	
15. Coupling	1	Time Allotted: 08:00 (12) / Actual Time: 5:51 Cars Used: 7449+7487
16. Uncoupling	1	Time Allotted: 05:00 (7.5) / Actual Time: 5:09 Cars Used: < 7486 > 7034
17. Isolation (Self-Recovery)	1	Time Allotted: 15:00 (22.5) / Actual Time: 14:48 Cars Used: 7486 / 7034
18. Manual Switch Operation	1	83 (A99)
IV. Miscellaneous		
19. Recovery Train Operation	1	Time Allotted: 12:00 (18) / Actual Time: 11:57 Cars Used: 7034+7486
20. Troubleshooting	1	(7487) Passenger Door Open 904-910 6a33
	1	(7449) Friction Brake C/B 913-924 1101

RTRA-606-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Training Certification - Page 2 of 4

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Name:	[redacted]	Emp.No:	[redacted]	Division:	Greenbelt	Date:	03/27/2024

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 version #:	%	N/A
TVOIM/TOIM	%	N/A
Supervisor Combination	%	
Practical attempt #: 2	QL- PASS	03/27/2024

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

Comments

Signatures:	Date:
Employee: [redacted]	3/27/24
Examiner: [redacted]	3/27/2024

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

Training Certification - Page 3 of 4

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet) Emp N [redacted] Date: 03/27/2024

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (*Remarks are required for a quality level sc* [redacted] *3)*
I. Preparation for Service	N/A	Cars Used:
1. Exterior Inspection	N/A	
2. Interior Inspection - Trailing Cab	N/A	
3. Interior Inspection - Each Car	N/A	
4. Interior Inspection – Oper. Cab	N/A	
5. Rolling Test / Rolling Brake Test	N/A	
		Time Allotted: 35:00 / Actual Time: :
II. Mainline Operation	PASS	
6. Communications	N/A	
7. Door Oper. & Station Stopping	N/A	
8. Use of Horn	N/A	
9. Speed Adherence/Manual Oper.	N/A	
10. Turn Back Moves	1	Location: C98-34 Time Allotted: 02:00 /Actual Time: 1:01
11. Manual Route Selection	N/A	Location:
12. EV Shutoff	1	Time Allotted: 00:30 (1:00) /Actual Time: 00:03
III. Yard Operation		
13. Communications	N/A	
14. Yard Movements	N/A	
15. Coupling	N/A	Time Allotted: 08:00 (12) / Actual Time: : Cars Used:
16. Uncoupling	N/A	Time Allotted: 05:00 (7.5) / Actual Time: : Cars Used:
17. Isolation (Self-Recovery)	N/A	Time Allotted: 15:00 (22.5) / Actual Time: : Cars Used:
18. Manual Switch Operation	N/A	
IV. Miscellaneous	PASS	
19. Recovery Train Operation	N/A	Time Allotted: 12:00 (18) / Actual Time: : Cars Used:
20. Troubleshooting	1	Cars Used: 7498 - ATC Power Supply (lead car) Reset 1:57
	1	7499 - Emergency Door Release 2:41

RTRA-906-01-00 TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION Page 2

Training Certification - Page 4 of 4

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Incident Status: PRELIMINARY

GENERAL INCIDENT INFORMATION

Incident Type:	Improper Door Operation/Doors Open Opposite Platform Side	Delay (Minutes):	Minor Delays
Incident Date:	Thursday, October 03, 2024	Vehicles Involved:	ID 504 **7362**-7636-7589
Incident Time:	8:06PM	First Reported By:	RVO [redacted]
Location:	Fort Totten Track #2		

BRIEF DESCRIPTION:

At approximately 8:06pm, RVO [redacted] performed an Improper Door Operation/Doors Open Opposite Platform Side at Fort Totten Trk #2. The incident was reported to the MICC by RVO [redacted]. A ground walk around was conducted, and there were no reported injuries. The train was removed from service and transported to F99 yard. RVO [redacted] was removed from service and transported for post incident testing.

Key Employees Involved & Employee Statements:

RVO [redacted] stated in his Incident Report: "ON 10/3/24 AT FT TOTTEN TRACK #2 AT APPROX 8:15PM MY TRAIN DOORS OPEN OFF THE PLATFORM SIDE. THE ADO OPENED PROPERLY, I CLOSED THE DOORS, I REALIZED I DIDN'T HAVE SPEED COMMANDS. I WENT TO REPOEN MY DOORS & REALIZED THE DOORS WERE OPENED ON THE WROING SIDE. I CLOSED THE DOORS AND NOTIFIED CENTRAL. I WAS IN SHOCK & DISBELIEF. I CANNOT RECALL HOW THOSE DOORS OPENED! SO I CAN'T SAY FOR CERTAIN IF I DID IT. IF I DID I AM EXTREMLY DISAPPOINTED IN MYSELF."

Post Incident Testing & Employee History:

- RVO [redacted] was removed from service and transported for post incident testing
- RVO [redacted] was hired with the Authority on March 5, 2018
- RVO [redacted] has been a Certified Train Operator since June 1, 2023
- RVO [redacted] last Train Certification was March 27, 2024 (Pass)

RTRA Preliminary Managerial Investigation Report - Page 1 of 3

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

SIGNIFICANT INCIDENT TIMELINE:

8:06PM – After properly servicing Fort Totten Track #2, the doors opened opposite side of the platform aboard Train ID 504. The RVO reported the occurrence to the MICC, and a ground walk around was conducted.

8:20PM – RVO [redacted] was removed from service and transported for Post Incident Testing.

SIGNIFICANT FINDINGS & PENDING ISSUES:

CORRECTIVE ACTIONS:

N/A

INCIDENT PHOTOS: ATTACH ANY SIGNIFICANT PHOTOS BASED ON THE INITIAL INCIDENT INVESTIGATION.

RTRA Preliminary Managerial Investigation Report - Page 2 of 3

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Report Prepared by:	Superintendent [redacted]	10/3/2024
Report Reviewed by:		

RTRA Preliminary Managerial Investigation Report - Page 3 of 3

Appendix D – RTRA Supervisor's Report

RTRA Supervisors' Report

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF OPERATIONS-RAIL SERVICE
Office of Rail Transportation

Date	Incident Time:	Incident Location (Station Mezzanine#)	Track/Mezzanine
10/03/2024	20:10hrs.	Fort Totten	Track #2

Equipment Number (Train ID & Car Numbers; Escalator/Elevator #, Room #)
7362x7363-7636x7637-7589x7588

Incident Description Doors opened off the platform.

WMATA Personnel Involved	Employee #	Rule Violation?	Home Division	Post Incident
[redacted]	[redacted]	8.18.3	Greenbelt	yes

Name N/A	**Address**	**Injury?**
Name	**Address**	**Injury?**
Name	**Address**	**Injury?**

Arrival Time		Person in Charge	Remarks
20:23hrs.		[redacted]	N/A

20:32hrs. Relieved unit #20 and transported Operator [redacted], to medical for post incident examine. When I asked Mr. [redacted] if he manually opened the door off the platform side, he stated he honestly wasn't sure. But didn't remember doing so.

Supervisor Submitting Report (include payroll #)	Date	Report Reviewed by	Date
[redacted]	10/03/2024		

RTRA Supervisor's Report Page 2 of 2

50.437 09/10 REPORT MUST BE FAXED TO ROCC [redacted] at end of tour

RTRA Supervisor's Report - Page 1 of 2

Details(continued from front)

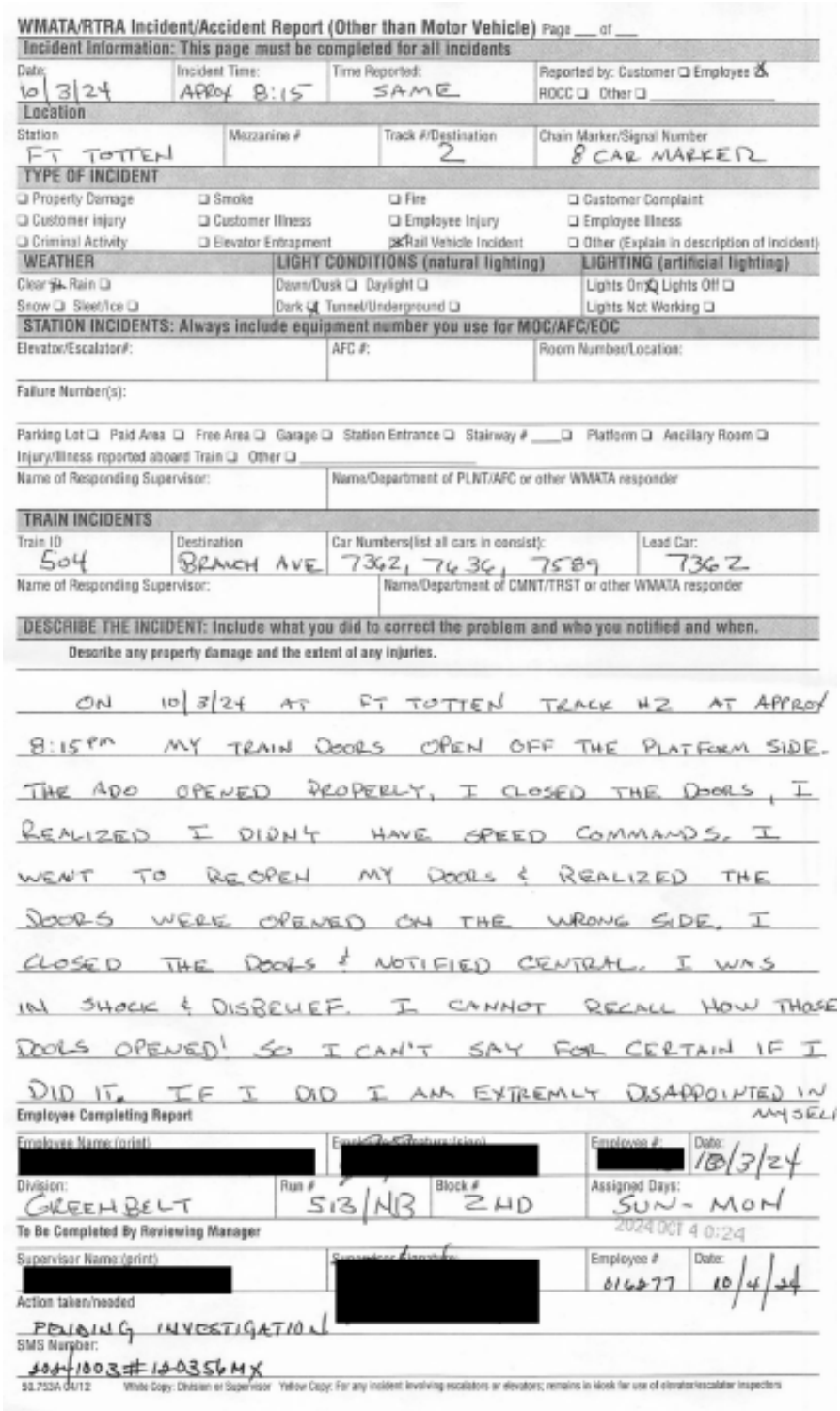
Key Findings (Detail below)

Supervisor Submitting Report (Initials)	Report Reviewed By (Initials)

50.437 09/10 REPORT MUST BE FAXED TO ROCC[redacted] at end of tour

RTRA Supervisor's Report - Page 2 of 2

Appendix E – RVO Incident/Accident Report



WMATA/RTRA Incident/Accident Report (Other than Motor Vehicle) Page ___ of ___

Incident Information: This page must be completed for all incidents

Date:	Incident Time:	Time Reported:	Reported by: Customer ❑ Employee ☒ ROCC ❑ Other ❑
10/3/24	APPROX 8:15	SAME	

Location

Station	Mezzanine #	Track #/Destination	Chain Marker/Signal Number
FT TOTTEN		2	8 CAR MARKER

TYPE OF INCIDENT

❑ Property Damage	❑ Smoke	❑ Fire	❑ Customer Complaint
❑ Customer injury	❑ Customer Illness	❑ Employee Injury	❑ Employee Illness
❑ Criminal Activity	❑ Elevator Entrapment	☒ Rail Vehicle Incident	❑ Other (Explain in description of incident)

WEATHER	LIGHT CONDITIONS (natural lighting)	LIGHTING (artificial lighting)
Clear ☒ Rain ❑	Dawn/Dusk ❑ Daylight ☒	Lights On ☒ Lights Off ❑
Snow ❑ Sleet/Ice ❑	Dark ❑ Tunnel/Underground ❑	Lights Not Working ❑

STATION INCIDENTS: Always include equipment number you use for MOC/AFC/EOC

Elevator/Escalator#:	AFC #:	Room Number/Location:

Failure Number(s):

Parking Lot ❑ Paid Area ❑ Free Area ❑ Garage ❑ Station Entrance ❑ Stairway # ___ ❑ Platform ❑ Ancillary Room ❑
Injury/Illness reported aboard Train ❑ Other ❑

Name of Responding Supervisor:	Name/Department of PLNT/AFC or other WMATA responder

TRAIN INCIDENTS

Train ID	Destination	Car Numbers(list all cars in consist):	Lead Car:
504	BRANCH AVE	7362, 7436, 7589	7362

Name of Responding Supervisor:	Name/Department of CMNT/TRST or other WMATA responder

DESCRIBE THE INCIDENT: Include what you did to correct the problem and who you notified and when.

Describe any property damage and the extent of any injuries.

ON 10/3/24 AT FT TOTTEN TRACK #2 AT APPROX 8:15PM MY TRAIN DOORS OPEN OFF THE PLATFORM SIDE. THE ADO OPENED PROPERLY, I CLOSED THE DOORS, I REALIZED I DIDN'T HAVE SPEED COMMANDS. I WENT TO REOPEN MY DOORS & REALIZED THE DOORS WERE OPENED ON THE WRONG SIDE. I CLOSED THE DOORS & NOTIFIED CENTRAL. I WAS IN SHOCK & DISBELIEF. I CANNOT RECALL HOW THOSE DOORS OPENED! SO I CAN'T SAY FOR CERTAIN IF I DID IT. IF I DID I AM EXTREMLY DISAPPOINTED IN MYSELF

Employee Completing Report

Employee Name (print):	Employee Signature (sign):	Employee #:	Date:
[redacted]	[redacted]	[redacted]	10/3/24

Division:	Run #	Block #	Assigned Days:
GREENBELT	513/N13	2ND	SUN - MON

2024 OCT 4 0:24

To Be Completed By Reviewing Manager

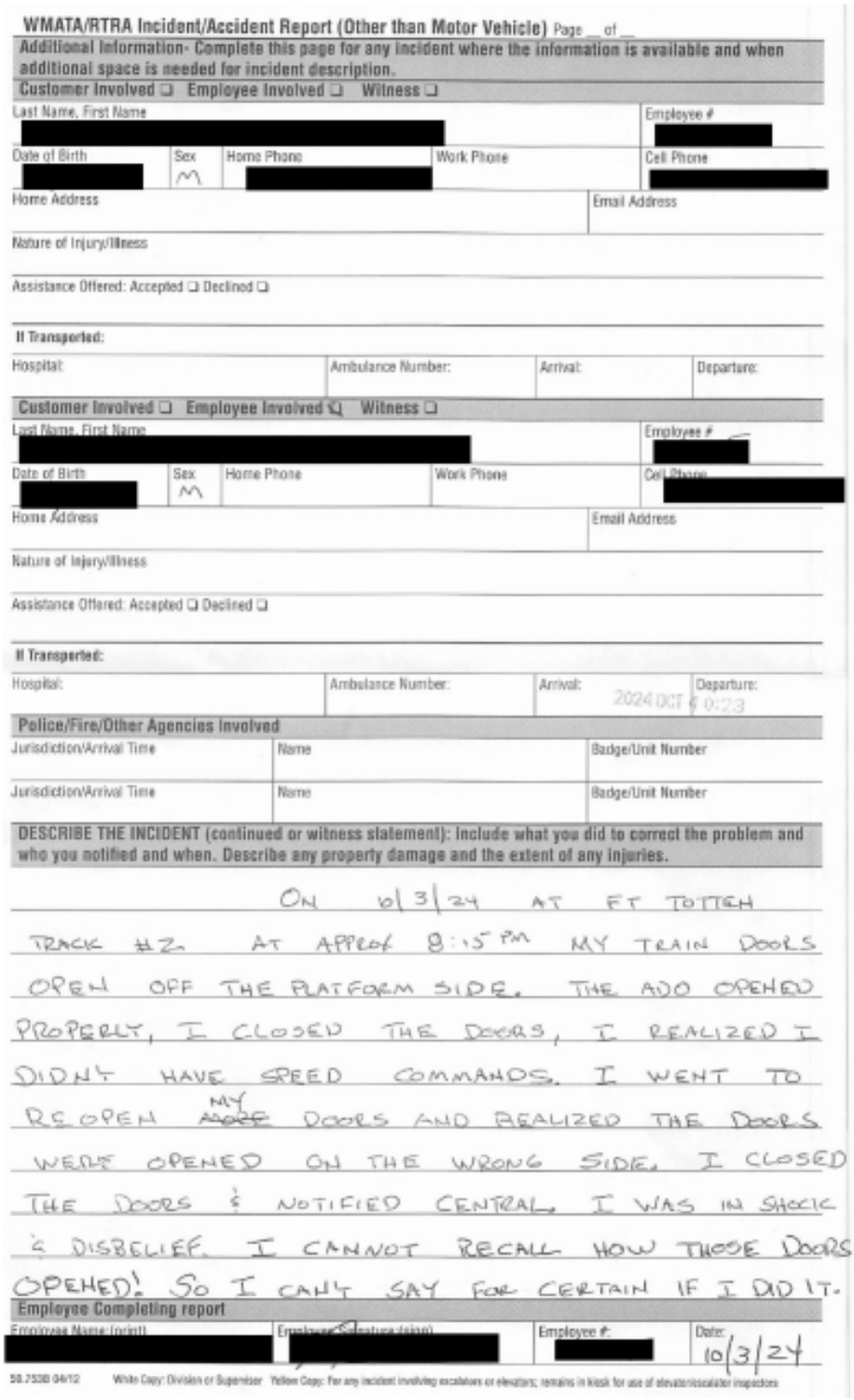
Supervisor Name (print):	Supervisor Signature:	Employee #	Date:
[redacted]	[redacted]	016877	10/4/24

Action taken/needed
PENDING INVESTIGATION

SMS Number:
~~1004~~ 1003 # 10-03-56 MX

SS 753A 04/12 White Copy: Division or Supervisor Yellow Copy: For any incident involving escalators or elevators; remains in kiosk for use of elevator/escalator inspectors

RVO Incident/Accident Report - Page 1 of 2



WMATA/RTRA Incident/Accident Report (Other than Motor Vehicle) Page __ of __

Additional Information- Complete this page for any incident where the information is available and when additional space is needed for incident description.

Customer Involved ❑ Employee Involved ❑ Witness ❑

Last Name, First Name [redacted] | Employee # [redacted]

Date of Birth [redacted] | Sex M | Home Phone [redacted] | Work Phone | Cell Phone [redacted]

Home Address | Email Address

Nature of Injury/Illness

Assistance Offered: Accepted ❑ Declined ❑

If Transported:

Hospital: | Ambulance Number: | Arrival: | Departure:

Customer Involved ❑ Employee Involved ❑ Witness ❑

Last Name, First Name [redacted] | Employee # [redacted]

Date of Birth [redacted] | Sex M | Home Phone | Work Phone | Cell Phone [redacted]

Home Address | Email Address

Nature of Injury/Illness

Assistance Offered: Accepted ❑ Declined ❑

If Transported:

Hospital: | Ambulance Number: | Arrival: 2024 OCT 0 0:23 | Departure:

Police/Fire/Other Agencies Involved

Jurisdiction/Arrival Time	Name	Badge/Unit Number
Jurisdiction/Arrival Time	Name	Badge/Unit Number

DESCRIBE THE INCIDENT (continued or witness statement): Include what you did to correct the problem and who you notified and when. Describe any property damage and the extent of any injuries.

ON 10/3/24 AT FT TOTTEN TRACK #2. AT APPROX 8:15 PM MY TRAIN DOORS OPEN OFF THE PLATFORM SIDE. THE ADO OPENED PROPERLY, I CLOSED THE DOORS, I REALIZED I DIDN'T HAVE SPEED COMMANDS. I WENT TO RE OPEN ~~MY ADO~~ DOORS AND REALIZED THE DOORS WERE OPENED ON THE WRONG SIDE. I CLOSED THE DOORS & NOTIFIED CENTRAL. I WAS IN SHOCK & DISBELIEF. I CANNOT RECALL HOW THOSE DOORS OPENED! SO I CAN'T SAY FOR CERTAIN IF I DID IT.

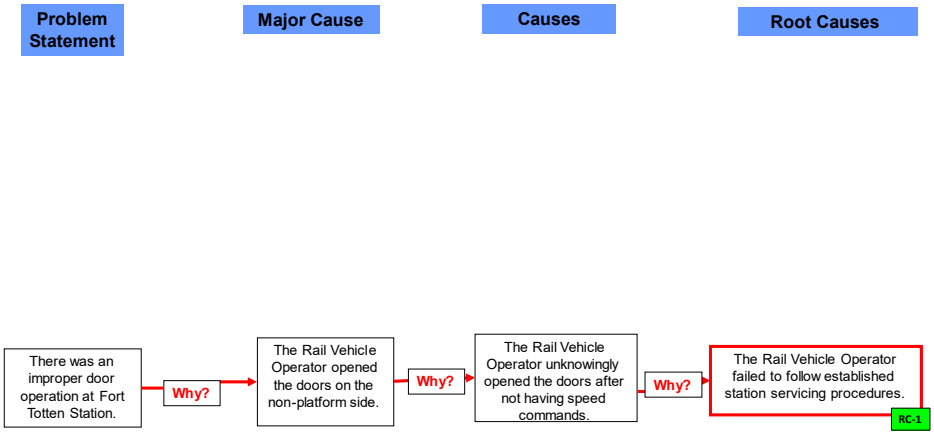
Employee Completing report

Employee Name: (print) [redacted] | Employee Signature (sign) [redacted] | Employee # [redacted] | Date: 10/3/24

58.7538 04/12 White Copy: Division or Supervisor Yellow Copy: For any incident involving escalators or elevators; remains in kiosk for use of elevator/escalator inspectors

RVO Incident/Accident Report - Page 2 of 2

Appendix F– Why Tree



Root Cause Analysis

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

FINAL REPORT OF INVESTIGATION A&I E24871

Date of Event:	October 29, 2024
Type of Event:	O-15 (a) Improper Door Operation
Incident Time:	14:50 Hours
Location:	Downtown Largo Station, Track 2
Time and How Received by Safety:	14:53 Hours – Safety Information Official (SIO)
Washington Metrorail Safety Commission (WMSC) Notification Time:	15:20 Hours
Responding Safety Officers:	None
Rail Vehicle:	Train ID 443 (L6120x21-6086x87-6108x09-6093x92T)
Injuries:	None
Damage:	None
Emergency Responders:	None
Safety Universal Data System Incidents/Accidents (SUDS I/A) Incident Number:	20241029#121039MX

Downtown Largo Station – Improper Door Operation

October 29, 2024

Table of Contents

Abbreviations and Acronyms

ADO	Automatic Door Open
AIMS	Advanced Information Management System
ARS	Audio Recording System
ATP	Automatic Train Protection
CCTV	Closed-Circuit Television
CMOR	Office of the Chief Mechanical Officer
IIT	Incident Investigation Team
MICC	Metro Integrated Command and Communications
MOR	Metrorail Operating Rulebook
NOAA	National Oceanic and Atmospheric Administration
OAP	Operations Administrative Policy
RTC	Rail Traffic Controller
RVO	Radio Vehicle Operator
SIO	Safety Information Official
SOP	Standard Operating Procedure
SUDS	Safety Universal Data System
VMS	Vehicle Monitoring 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 Tuesday, October 29, 2024, an eight-car 6000 series Train ID 443 operated by an Alexandria Division Rail Vehicle Operator (RVO) experienced an Improper Door Operation at Downtown Largo Station on track 2.

The RVO took over operating Train ID 443 at King Street Station and operated the train to Downtown Largo Station. There, they stopped 20 feet before the 8-car marker with two door leaves outside the platform limits and manually opened the train doors on the platform side of the station.

The Terminal Supervisor reported the incident to the Metro Integrated Command and Communication (MICC) Center, Radio Rail Traffic Controller (RTC). A yard operator conducted a ground walk-around of the train and found no passengers on the roadway.

There were no injuries and no damage as a result of this event.

In adherence to Standard Operating Procedure 102-01-02, which outlines the protocol for Removing an Employee from Service for involvement in an operational safety event, the Radio RTC dispatched a Rail Supervisor to relieve the Rail Vehicle Operator from duty for post-incident testing.

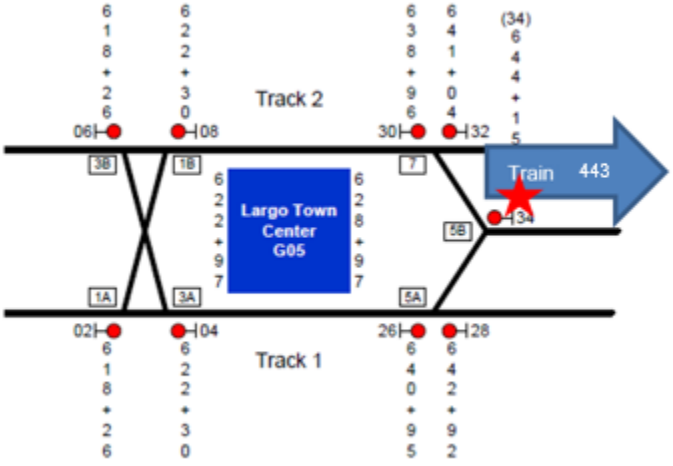
In adherence to the Office of the Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Operations Administrative Policy (OAP) 102.06, the MICC removed Train ID 443 from revenue service for post-incident inspection. This action followed the Rail Vehicle Event Investigation Policy, ensuring a thorough examination of the incident.

The probable cause of the Improper Door Operation event at Downtown Largo Station on October 29, 2024, was the RVO rushing, which led to their failure to follow the established procedure for door operations. The train was not stopped at the 8-car marker before a door operation occurred.

Incident Site

Downtown Largo Station, track 2 – Outside aerial structure with a center platform.

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 video and document review.

- 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

- 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:
    - RVO 30-day work history
    - RVO Manifest
    - RVO Incident Report
    - RTRA Managerial Incident Investigation Report
    - Metrorail Operating Rulebook (MOR)

- National Oceanic and Atmospheric Administration (NOAA)

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
  - Audio Recording System (ARS) playback (Radio -LGYD and phone)
  - Closed-Circuit Television (CCTV)

Investigation

On Tuesday, October 29, 2024, at 14:44 hours, the Audio Recording System (ARS) revealed that the RVO of Train ID 443 requested permission to enter the platform at Downtown Largo Station while the train was located at Morgan Boulevard Station. The Terminal Supervisor granted the RVO permission to access the platform with a permissive block and instructed them to operate the train to the 8-car marker utilizing Automatic Door Open (ADO) operations. The RVO repeated the instruction with a 100% repeat back. The Terminal Supervisor instructed the RVO to "conduct a quick and safe reverse of operating ends."

Closed-Circuit Television (CCTV) revealed that Train ID 443 arrived at Downtown Largo Station on track 2, stopped on the platform 20 feet from the 8-car marker, and the RVO manually opened the train doors on the platform side with their head placed outside the operator cab window.

Figure 1 (left) - Train ID 443 stopped 20 feet before the 8-car marker. (right) – RVO manually opened the train door with their head placed outside the operator's cab window.

According to the CMOR IIT analysis at 14:48 hours, after the RVO opened the train doors outside the platform limits, the train was keyed down, and the doors were not closed until the train was keyed up in the trailing car (6092) 4 minutes later.

At 14:51 hours, the Terminal Supervisor notified the Radio RTC via phone that Train ID 443 had experienced Improper Door Operation. The doors of the trailing car were positioned with two door leaves open outside the platform limits. The Button RTC notified the MICC Operations Manager (OM) of the incident.

At 14:53 hours, the OM notified the Safety Information Official (SIO) of the Improper Door Operation event.

At 14:57 hours, the Terminal Supervisor reported that a Yard Operator completed the ground walk-around on Train ID 443, and no passengers exited the train onto the roadway.

At 14:59 hours, the SIO informed the Safety Director On-Call.

No injuries were reported, and the RVO was removed from service at Downtown Largo Station for a post-incident medical examination. Train ID 443 was removed from service and transported non-revenue to New Carrollton Yard for post-incident inspection.

Chronological Event Timeline

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

Time	Description
14:44:27 hours	Train ID 443: Requested permission to the platform at Downtown Largo from the Morgan Boulevard platform, track 2. Terminal Supervisor: Granted the train permission to continue towards Downtown Largo. [Ops, Largo]
14:46:59 hours	Terminal Supervisor: Granted a permissive block with a lunar at signal G05-02, crossing the train from track 1 to track 2 up to the 8-car marker utilizing ADO operations. Train ID 443: Repeated permissive block. [Ops, Largo]
14:47:51 hours	Terminal Supervisor: Requested a quick and safe reverse operating end. Train ID 443: Acknowledged. [Ops, Largo]
14:51:12 hours	Terminal Supervisor: Reported Train ID 443 opened their doors outside the platform limits. Radio RTC: Acknowledged and requested personnel complete a ground walk-around of the train. Terminal Supervisor: Acknowledged. [Phone]
14:51:42 hours	Button RTC: Notified the OM of the Improper Door Operation event. Rail 1: Acknowledged. [Phone]
14:53:20 hours	Rail 1: Notified the SIO of the Improper Door Operation event. [Phone]
14:53:39 hours	Radio RTC: Requested control of the Downtown Largo Station's control panel. [Phone]
14:57:37 hours	Terminal Supervisor: Reported that the yard operator completed the ground walk-around. Radio RTC: Acknowledged. [Phone]
14:59:32 hours	SIO: Notified the SDOC of the Improper Door Operation event. [Phone]
15:15:54 hours	Radio RTC: Returned the Downtown Largo Station's control panel to the Terminal Supervisor. [Phone]

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

Advanced Information Management System (AIMS)

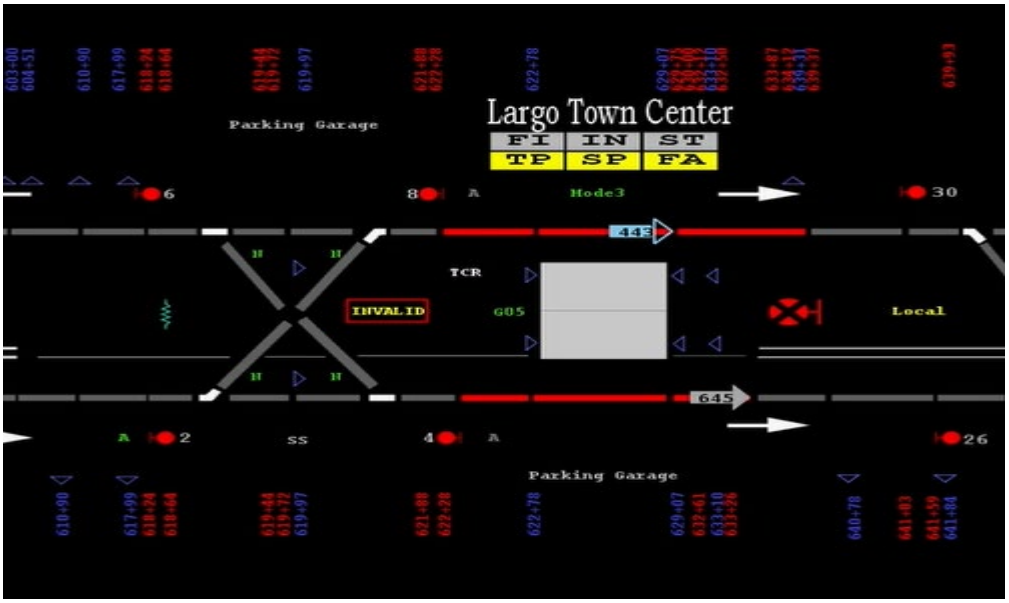


Figure 2 - depicts AIMS view of Train ID 443 arriving on the platform at Downton Largo Station at 14:18:40 hours.

The Office of Chief Mechanical Officer / Vehicle Monitoring System (VMS)
Adopted from Office of Chief Mechanical Officer IIT report with minor formatting and grammatical edits:

The Incident Investigation Team (IIT) completed a data analysis. Based on the data, Train ID 443 entered Downtown Largo, track 2, and came to a complete stop 20 feet before the 8-car marker. The Train berthed pushbutton was activated 5 feet before coming to a complete stop. Once the train was stopped, the Right Door open pushbutton was activated, opening the right-side doors on the platform side, with 20 feet of the trailing car off the platform.

The lead car, 6120, was keyed down shortly after opening the doors.

The trailing car, car 6092, was keyed up, and the left door close pushbutton was activated, closing the left side doors (platform side). Then, car 6092 was keyed down.

Car 6092 was keyed back up. The Automatic Train Protection (ATP) limiting speed and regulated speed limits increased to 40 MPH, and the Master controller was moved to the P4 Power position. The train began to move toward Morgan Blvd.

Based on the Vehicle Monitoring System (VMS) data, the train performed as designed, and no fault contributed to the cause of this incident.

See the timeline of events below:

Time	Description of Events	Train Speed	Master Controller Position	Distance to 8-Car Marker
14:47:23.112	Train ID 443 entered Largo station on track 2 at a speed of 17 MPH, with the Master controller in the Coast position.	***17 MPH***	***Coast***	***600***
14:47:51.748	The Master Controller was placed in the B4 Braking position; the Train speed was 8 MPH, 42 feet before the 8-car marker.	***8 MPH***	***B4***	***45 feet***
14:47:51.940	ATP Limiting Speed and Regulated speed drop to zero MPH, and the Full-Service Brake Applies B4 Braking Rate.	***8 MPH***	***B4***	***42 feet***
14:47:53.635	The train berth pushbutton was depressed, and the train speed was 6 MPH, 25 feet before the 8-car marker.	***6 MPH***	***B4***	***25 feet***
14:47:55.553	The train comes to a complete stop **20 feet** before the 8-car marker.	***0 MPH***	***B4***	***20 feet***
14:48:02.656	The right Door open pushbutton was activated, and the Right Doors opened, with the trailing 20 feet of the consist off the platform.	***0 MPH***	***B5***	***20 feet***
14:48:08.544	The lead car 6120 was keyed down.	***0 MPH***	***B5***	***20 feet***
14:52:30.828	The trailing car 6092, facing Morgan Blvd, was keyed up.	***0 MPH***	***B5***	***20 feet***
14:52:56.148	The left Door Close pushbutton was activated, and the left Doors Closed.	***0 MPH***	***B5***	***20 feet***
14:53.04.204	The DCKR goes HIGH, indicating All Doors are Closed and Locked.	***0 MPH***	***B5***	***20 feet***
14:53.14.372	Car 6092 was keyed down.	***0 MPH***	***B5***	***20 feet***
15:10:36.232	Car 6092 was keyed Up.	***0 MPH***	***B5***	***20 feet***
15:11:51.680	ATP Limiting Speed and Regulated speed increase from 0 MPH to 40 MPH.	***0 MPH***	***B5***	***20 feet***
15:12:18.756	The Master Controller is placed in the P4 Power position, and the train begins to move in the direction of Morgan Blvd.	***<1 MPH***	***P4***	

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

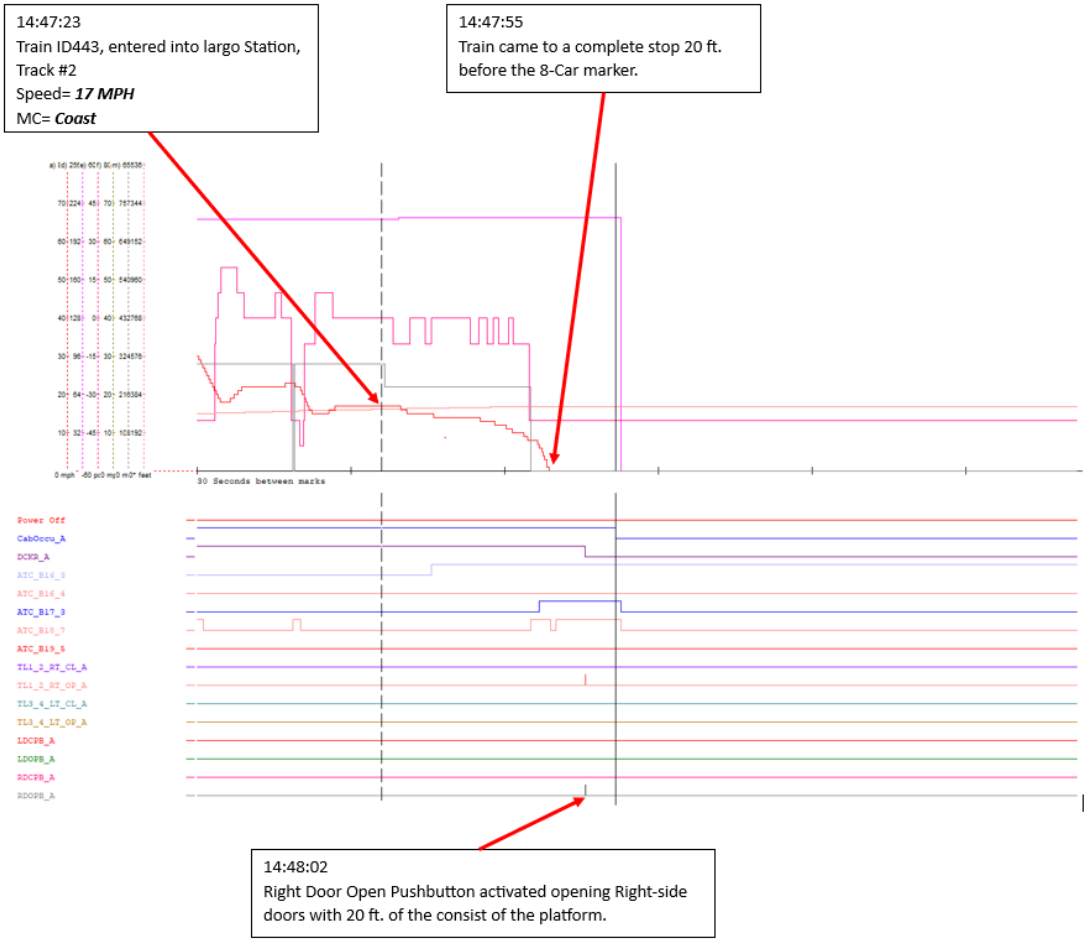


Figure 3 - Data analysis from lead railcar 6120.

Office of Rail Transportation
Adopted from the Office of Rail Transportation investigation report:

"On Tuesday, October 29, 2024, at approximately 2:52 p.m., an Improper Door Operation was reported at Downtown Largo station (G05), Track #2. The RVO of Train ID 443 stopped short of the eight-car marker, resulting in the doors on the trailing car being opened off the platform.

The RVO admitted to the error in an incident report and was found to have violated multiple safety and operational policies, including improper door operation and failure to maintain safe procedures. The RVO's performance history revealed a prior Improper Door Operation in March 2023.

After an investigation that included reviewing reports, interviews, and data analysis, the RVO was issued discipline in accordance with the disciplinary administration program, including a final warning and refresher training."

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. The 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 stated that they relieved an operator at King Street Station, track 1, and operated to Downtown Largo, making 8-car stops in ADO.
- The RVO stated that the Terminal Supervisor instructed them to take the train to the 8-car marker quickly and efficiently because the train was returning to the mainline.
- The RVO stated that they stopped 12 feet from the 8-car marker and pressed the train berth, but the doors did not open.

Weather

On October 29, 2024, at the time of the incident, NOAA recorded the temperature as 68°F, with mostly cloudy skies, winds 7 mph, and 49% humidity. The weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Largo, Maryland)

Related Rules and Procedures

8.18 Door Operation

8.18.1 Failure of train doors to open or close properly must be reported to the Rail Traffic Controller immediately.

8.18.2 In revenue service, Rail Vehicle Operators shall not manually operate any OPEN DOORS control except the crew key switch while any side doors of the train are outside the limits of a station platform, except when directed by the Rail Traffic Controller.

8.18.3 In revenue service, when the train is otherwise within the limits of a station platform, Rail Vehicle Operators shall not manually OPEN DOORS control on the side of the train opposite the platform.

8.18.4 In the event train doors are opened outside the platform limits or on the side of opposite the platform, Rail Vehicle Operators shall close doors, notify the Rail Traffic Controller, and conduct a ground walk around inspection. The Rail Traffic Controller will determine if the train is to be taken out of service and if it is safe to discharge customers at that station.

18.1 General Safety Rules

18.1.4 Employees shall always maintain situational awareness of their surroundings.

Standard Operating Procedure (SOP) 40 *Procedure for Platform Berthing, Station Servicing and Overruns.*

6.2 Door Opening Procedures

6.2.2 When train is operating in Mode 2 and the Door Mode Selector is in the Auto/Manual position, to automatically open the doors, the Rail Vehicle Operator shall:

6.2.2.1 Depress the Train Berth pushbutton at three (3) miles per hour (mph) or less; and

6.2.2.2 Properly berth the train on the platform.

Human Factors

Fatigue

Signs and Symptoms of Fatigue

RVO

A Safety Investigator evaluated signs and symptoms of fatigue that may have been present at the time of the incident. No signs or symptoms of fatigue were detected from the available data. Video of the incident was reviewed for signs of RVO's fatigue. No signs or symptoms of fatigue were evident from the video. The employee reported feeling fully alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

RVO

A Safety Investigator evaluated incident data for fatigue risk factors. Risk factors for fatigue were not present. The incident time of day did not suggest an increased risk of fatigue-related impairment. The employee reported keeping a regular sleep schedule in the days leading up to the incident. The employee worked the evening shift in the days leading up to the incident. The employee was awake for five hours and sixteen minutes at the time of the incident. The employee reported seven hours and ten minutes of sleep in the 24 hours preceding the incident. The off-duty period was eleven hours and forty-five minutes, providing an opportunity for 7-9 hours of sleep. This was a comparable amount of the employee's usual workday sleep duration. The employee 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 RVO was operating an eight-car train.
- The RVO stopped the train 20 feet before the 8-car marker.
- The Train berthed pushbutton was activated 5 feet before coming to a complete stop.
- The RVO manually opened the train doors with the trailing two-door leaves, not within the platform limits.

Immediate Mitigation to Prevent Recurrence

- A ground walkaround inspection was conducted.
- The consist was removed from revenue service for investigation.
- The RVO was removed from service for post-incident testing.

Probable Cause Statement

The probable cause of the Improper Door Operation event at Downtown Largo Station on October 29, 2024, was the RVO rushing, which led to their failure to follow the established procedure for door operations. The train was not stopped at the 8-car marker before a door operation occurred.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
121039_SAFECAPS_RTRA_001	RVO to attend refresher training with the Rail Operations Quality Training (ROQT) department.	RTRA SRC	Completed

Appendices

Appendix A – Interview Summary

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.

Rail Vehicle Operator

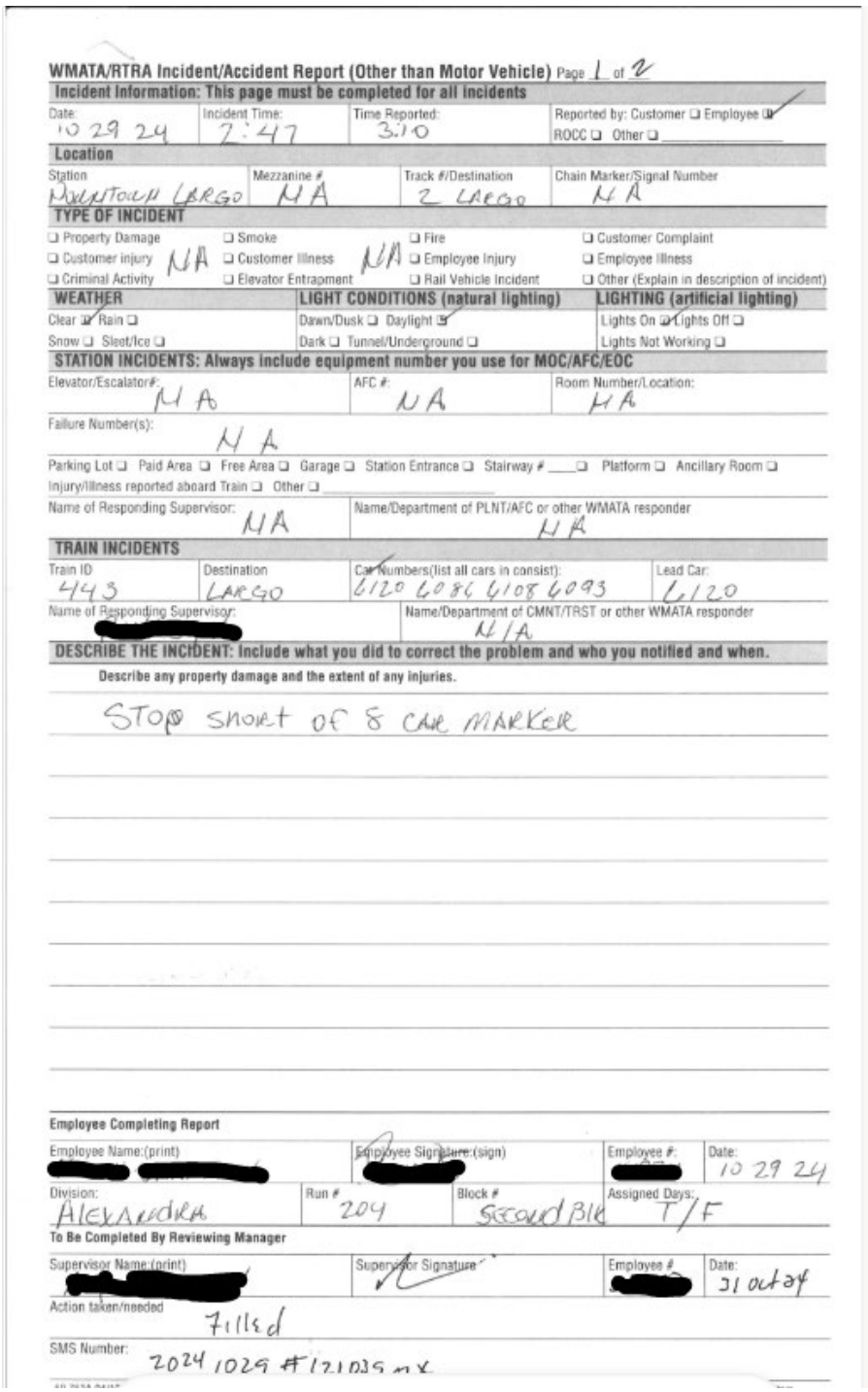
The RVO has been a WMATA employee since March 4, 2013, and an RVO since February 25, 2018. The RVO had one previous safety violation on May 26, 2023 (Door open off platform side). The RVO was last certified on July 23, 2024.

During a formal interview, the RVO said they relieved an operator at King Street Station, track 1, and operated to Downtown Largo, making 8-car stops in ADO.

The RVO stated that when they arrived at Downtown Largo Signal, the Terminal Supervisor instructed them to take the train to the 8-car marker quickly and efficiently because the train was returning to the mainline.

After acknowledging and repeating the instructions, the RVO said they thought they had a 6-car consist. They stopped 12 feet from the 8-car marker and pressed the train berth, but the doors did not open. They then manually opened the doors and keyed the train down.

Appendix B – Incident Report (redacted)



WMATA/RTRA Incident/Accident Report (Other than Motor Vehicle) Page 1 of 2

Incident Information: This page must be completed for all incidents

Date:	Incident Time:	Time Reported:	Reported by: Customer ❑ Employee ☑ ROCC ❑ Other ❑
10 29 24	7:47	3:10	

Location

Station	Mezzanine #	Track #/Destination	Chain Marker/Signal Number
Morgan Blvd Largo	NA	2 Largo	NA

TYPE OF INCIDENT

❑ Property Damage	❑ Smoke	❑ Fire	❑ Customer Complaint
❑ Customer injury NA	❑ Customer Illness NA	❑ Employee Injury	❑ Employee Illness
❑ Criminal Activity	❑ Elevator Entrapment	❑ Rail Vehicle Incident	❑ Other (Explain in description of incident)

WEATHER	LIGHT CONDITIONS (natural lighting)	LIGHTING (artificial lighting)
Clear ☑ Rain ❑	Dawn/Dusk ❑ Daylight ☑	Lights On ☑ Lights Off ❑
Snow ❑ Sleet/Ice ❑	Dark ❑ Tunnel/Underground ❑	Lights Not Working ❑

STATION INCIDENTS: Always include equipment number you use for MOC/AFC/EOC

Elevator/Escalator#:	AFC #:	Room Number/Location:
NA	NA	NA

Failure Number(s): NA

Parking Lot ❑ Paid Area ❑ Free Area ❑ Garage ❑ Station Entrance ❑ Stairway # ___ ❑ Platform ❑ Ancillary Room ❑
Injury/illness reported aboard Train ❑ Other ❑

Name of Responding Supervisor:	Name/Department of PLNT/AFC or other WMATA responder
NA	NA

TRAIN INCIDENTS

Train ID	Destination	Car Numbers(list all cars in consist):	Lead Car:
443	Largo	6120 6086 6108 6093	6120

Name of Responding Supervisor: [redacted]	Name/Department of CMNT/TRST or other WMATA responder
	N/A

DESCRIBE THE INCIDENT: Include what you did to correct the problem and who you notified and when.

Describe any property damage and the extent of any injuries.

Stop short of 8 car marker

Employee Completing Report

Employee Name:(print)	Employee Signature:(sign)	Employee #:	Date:
[redacted]	[redacted]	[redacted]	10 29 24

Division:	Run #	Block #	Assigned Days:
Alexandria	204	Second Blk	T/F

To Be Completed By Reviewing Manager

Supervisor Name:(print)	Supervisor Signature	Employee #	Date:
[redacted]		[redacted]	31 oct 24

Action taken/needed: Filed

SMS Number: 2024 1029 # 121035 mx

Figure 4 - Incident Report.

Appendix C – Managerial Incident Investigation Report (redacted)

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Incident Status: PRELIMINARY

GENERAL INCIDENT INFORMATION

Incident Type:	Improper doors	Delay (Minutes):	None
Incident Date:	Tuesday, October 29, 2024	Vehicles Involved:	6120 x 6086 x 6108 x 6093
Incident Time:	14:52pm	First Reported By:	Operator
Location:	Largo Town Center Trk #2		

BRIEF DESCRIPTION:

Train # 408 Stop short at Largo Town Center track #2 resulting on doors of platform side.

Key Employees Involved & Employee Statements:

Forthcoming

Post Incident Testing & Employee History:

Train operator [redacted] was transported for post-incident testing.
Train Operator has been employed with WMATA since 04 March 2013 and train operator since 25 February 2018. Operator has one safety violation on 26 May 2023 (doors of opposite side)
Last certification was on 23 July 2024.

Figure 5 - Managerial Report page 1 of 3.

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

SIGNIFICANT INCIDENT TIMELINE:

Provide an incident timeline of significant events only, by time point. See example below.

[Example]
12:00 AM - Received a report from ROCC.
12:05 AM - Arrived on the scene.
12:10 AM - etc...

SIGNIFICANT FINDINGS & PENDING ISSUES:

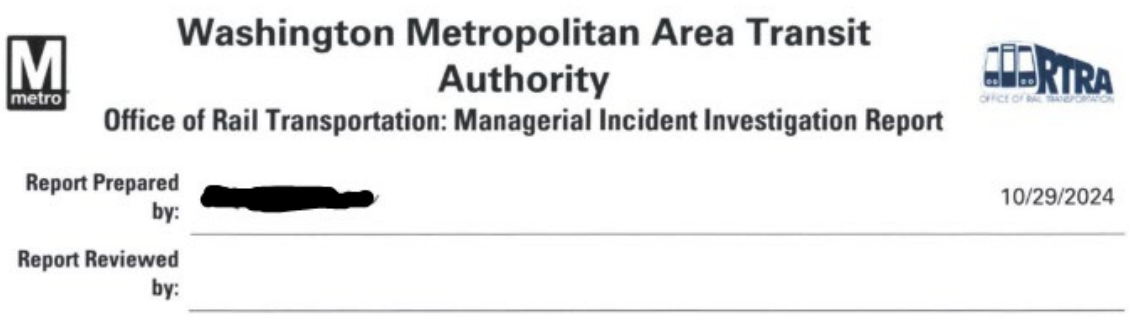
Under investigation

CORRECTIVE ACTIONS:

Corrective Actions are currently unknown.

INCIDENT PHOTOS: ATTACH ANY SIGNIFICANT PHOTOS BASED ON THE INITIAL INCIDENT INVESTIGATION.

Figure 6 - Managerial Report page 2 of 3.



Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Report Prepared by: [redacted] 10/29/2024

Report Reviewed by:

Figure 7 - Managerial Report page 3 of 3.

Appendix D – Root Cause Analysis

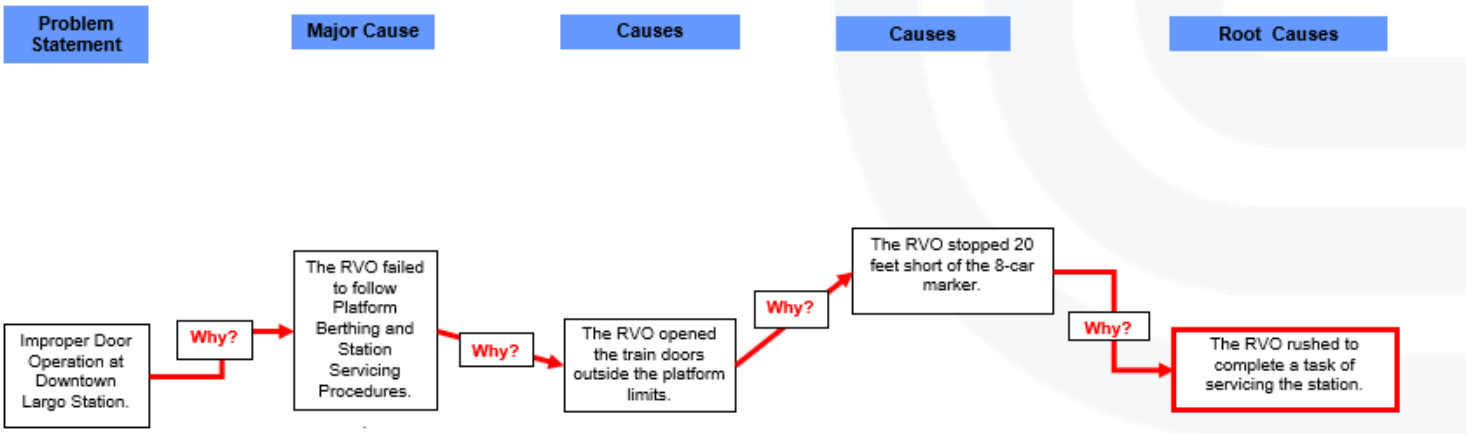


Figure 8 - Root Cause Analysis.

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

FINAL REPORT OF INVESTIGATION A&I E24950

Date of Event:	November 25, 2024
Type of Event:	O-15a: Improper Door Operation
Incident Time:	16:21 hours
Location:	King Street Station, Track 2
Time and How received by Safety:	16:28 hours / MICC Notification
Washington Metrorail Safety Commission (WMSC) Notification Time:	17:14 hours
Responding Safety Officers:	None
Rail Vehicle:	Train ID 332 (L7194/95X7488/89X7689/88T)
Injuries:	N/A
Damage:	N/A
Emergency Responders:	N/A
Safety Universal Data System (SUDS) Incident Number:	20241125#121720

November 25, 2024
Table of Contents

Abbreviations and Acronyms

ADO	Automatic Door Operations
AIMS	Advanced Information Management System
ARS	Audio Recording System
ATCE	Automatic Train Control Engineering
CCTV	Closed-Circuit Television
CMOR	The Office of the Chief Mechanical Officer
COSI	The Office of Communications and Signaling
ER	Event Recorder
IIT	Incident Investigation Team
MICC	Metro Integrated Command and Communications Center
MOR	Metrorail Operating Rulebook
NOAA	National Oceanic and Atmospheric Administration
NVR	Network Video Recorder
ROS	Rail Operations Supervisor
RTC	Rail Traffic Controller
RTRA	The Office of Rail Transportation
RVO	Rail Vehicle Operator
RWP	Roadway Worker Protection
SOP	Standard Operating Procedure
SPOTS	System Performance On-Time Summary
SUDS	Safety Universal Data System
TWC	Train to Wayside Communication
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 Monday, November 25, 2024, at 16:20:31 hours, Train ID 332, a six (6) car 7000 series consist (L7194/95X7488/89X7689/88T), entered the platform limits at King Street Station, stopping one (1) foot short of the designated 8-car marker. At 16:21:04 hours, the Rail Vehicle Operator (RVO #1) initiated Automatic Door Operations (ADO) by pressing the Train Berth pushbutton, opening the platform-side doors (left side) for passenger service.

During this time, a non-revenue Rail Vehicle Operator (RVO #2) positioned near Train ID 332 trailing car's (7688) last door intended to board the train to travel to Huntington Station. However, RVO #2 was approached by a customer requesting assistance in holding Train ID 332's doors open to allow a customer using a wheelchair to alight. After assisting the customer, RVO #1—unaware of RVO #2's intent to board—closed the platform-side doors. Consequently, RVO #2 remained on the platform as the train doors shut.

At 16:21:18 hours, RVO #2 contacted the Metro Integrated Command and Communications Center (MICC) via handheld radio, requesting the OPS 3 Rail Traffic Controller (RTC) to hold Train ID 332. RVO #1, hearing the radio communication while walking toward the operator's seat, inadvertently pressed the Right Door Open pushbutton, opening the non-platform side doors. Railcar Network Video Recorder (NVR) footage confirmed this improper door operation. RVO #1 subsequently opened the platform-side doors, allowing RVO #2 to board. At 16:21:42 hours, RVO #1 observed the non-platform side doors open and pressed the Right Door Closed pushbutton.

RVO #1 reported a potential improper door operation to the OPS 3 RTC and the RTC dispatched a Rail Operations Supervisor (ROS) from Reagan National Airport Station.

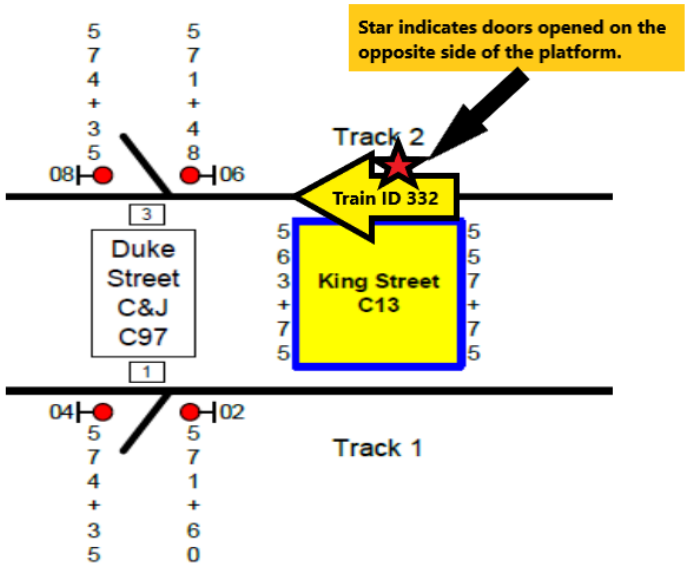
At 16:32:34 hours, Train ID 332 was removed from service, re-blocked as Train ID 732, and sent to Alexandria Yard.

The probable cause of the improper door operation event at King Street Station on November 25, 2024, was RVO #1's lack of situational awareness and deviation from established procedures. Specifically, RVO #1 failed to follow the established procedures in SOP 40, section 6.2 Door Opening Procedures.

Incident Site

King Street Station, Track 2. King Street Station is an outdoor aerial station with a center platform and direct fixation tracks. There is an interlocking on the outbound end 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:

- Site Assessment through video and document review.

- Formal Interviews – Safety interviewed three (3) individuals 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 individuals:
  - RVO #1
  - RVO #2
  - Station Manager

- 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:
  - RVO #1 Training Records
  - RVO #1 Certifications
  - RVO #1 30-Day work history review
  - Metrorail Operating Rulebook (MOR)

- National Oceanic and Atmospheric Administration (NOAA)
- Metro Integrated Command and Communications (MICC) Incident Report
- Maximo Work Order (W.O.) Data
- The Office of the Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Report
- The Office of Communications and Signaling (COSI) Automatic Train Control Engineering (ATCE) Report
- Rail Transportation (RTRA) Managerial Incident Investigation Report
- Standard Operating Procedure (SOP) 40—Procedure for Platform Berthing, Station Servicing and Overruns

- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:
  - Audio Recording System (ARS) playback
  - Closed-Circuit Television (CCTV)
  - Network Video Recorder (NVR)
  - The Office of Chief Mechanical Officer Incident Investigation Team (IIT) Vehicle Monitoring and Diagnostic System (VMDS)
  - Advanced Information Management System (AIMS)
  - Train to Wayside Communication (TWC) Tool
  - System Performance On-Time Summary (SPOTS) Report
  -

Investigation

On Monday, November 25, 2024, at 16:20:31 hours, Train ID 332, entered the platform limits at King Street Station, on track 2, stopping one (1) foot short of the designated 8-car marker. At 16:21:04, RVO #1 initiated ADO by pressing the Train Berth pushbutton, resulting in the platform-side doors opening on the train's left side for passenger service.

Figure 1 - Depicts RVO #1 entering King Street Station, track 2 utilizing ADO.

During this time, a non-revenue RVO #2 was positioned near the last door of the trailing car. RVO #2 intended to board Train ID 332 to travel to Huntington Station. However, they were approached

by a customer requesting assistance in holding the train doors open to allow a wheelchair user to alight.

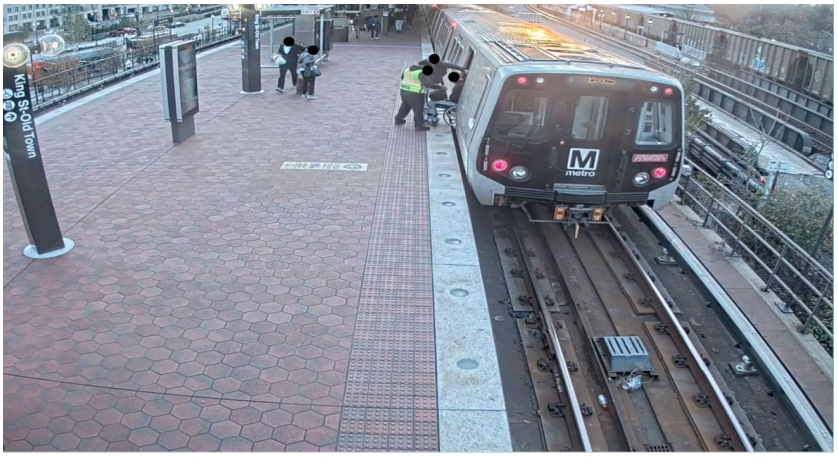


Figure 2 - Depicts RVO #2 assisting the customer using a wheelchair to exit the train.

After the customer using the wheelchair successfully exited the train, RVO #1—unaware of RVO #2's intent to board—pressed the Left Door Close pushbutton, initiating the closure of the platform-side doors. As a result, RVO #2 remained on the platform while the train doors closed.

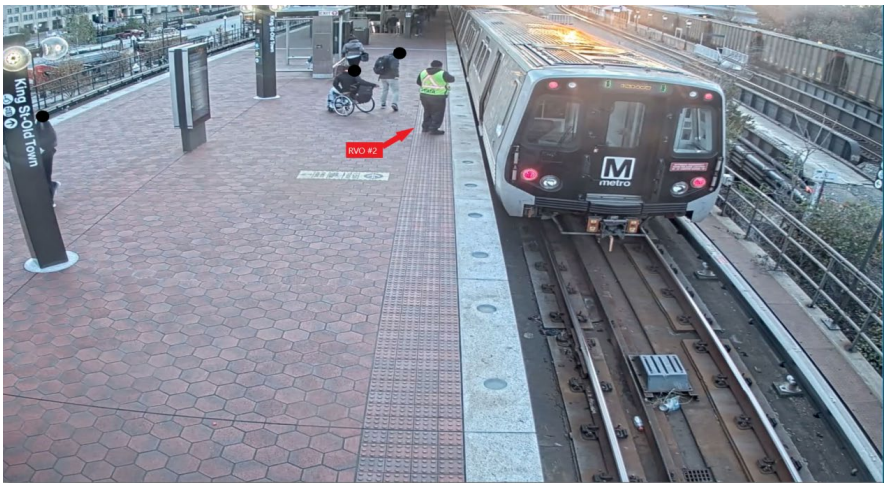


Figure 3 - Depicts RVO #2 radioing the OPS 3 Radio RTC to request Train ID 332 hold their location.

At 16:21:18 hours, RVO #2 utilized their handheld radio to contact the MICC, specifically requesting that the OPS 3 RTC instruct Train ID 332 to hold its position to allow them to board. At 16:21:25 hours, as RVO #1 was walking towards the RVO seat, they heard the request, and inadvertently pressed the Right Door Open pushbutton, opening the non-platform side doors of the train. NVR footage from Train ID 332 confirmed the doors opened on the non-platform side of the consist.

Figure 4 - Depicts RVO #1 pressing the Right Door Open pushbutton.

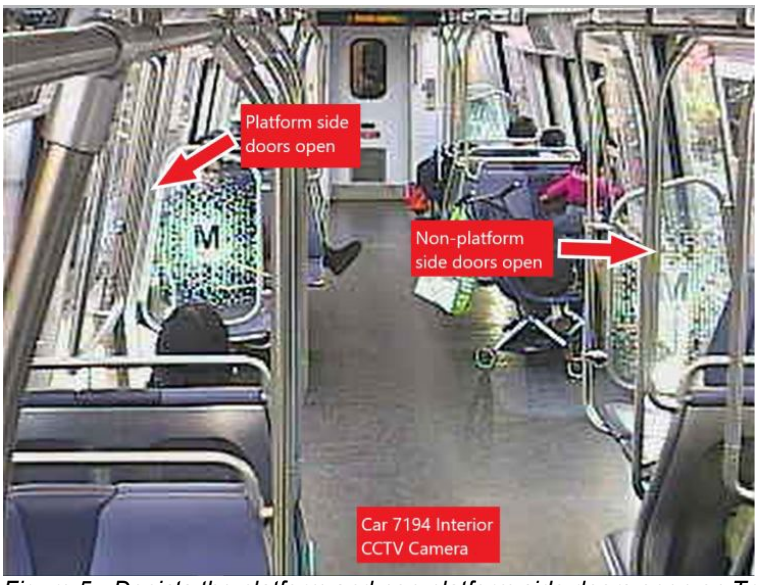


Figure 5 - Depicts the platform and non-platform side doors open on Train ID 332.

RVO #1 then pressed the Left Door Open pushbutton, opening the platform side doors of the train. RVO #2 boarded the train and sat in the trailing car without informing RVO #1 or the MICC of the incident. It should be noted that at no time did RVO #2 operate Train ID 332. At 16:21:31 hours, King Street Station CCTV footage depicted RVO #1 walking towards the platform side window, peering through the interior facing car window, and observing the non-platform side train doors open. RVO #1 then pressed the Right Door Close pushbutton, closing the non-platform side doors.

Figure 6 - Depicts RVO #1 pressing the Right Door Closed pushbutton.

At 16:22:18 hours, RVO #1 contacted the OPS 3 Radio RTC to report a possible improper door operation involving their train and requested permission to perform a ground walkaround inspection of the train. RVO #1 further explained they reopened the doors because they heard, over the radio, a WMATA employee instruct them to hold the train. RVO #1 believed there may have been an incident at the rear of the train. The Radio RTC radioed for the nearest ROS in the area to assist. A ROS located at Reagan National Airport Station was dispatched to the location. At 16:23:29 hours, the OPS 3 Buttons RTC notified the MICC Communications Section—Communications Agent of the possible improper door operation. The Communications Agent contacted the King Street Station Manager and instructed them to assist Train ID 332 with the possible offloading of customers.

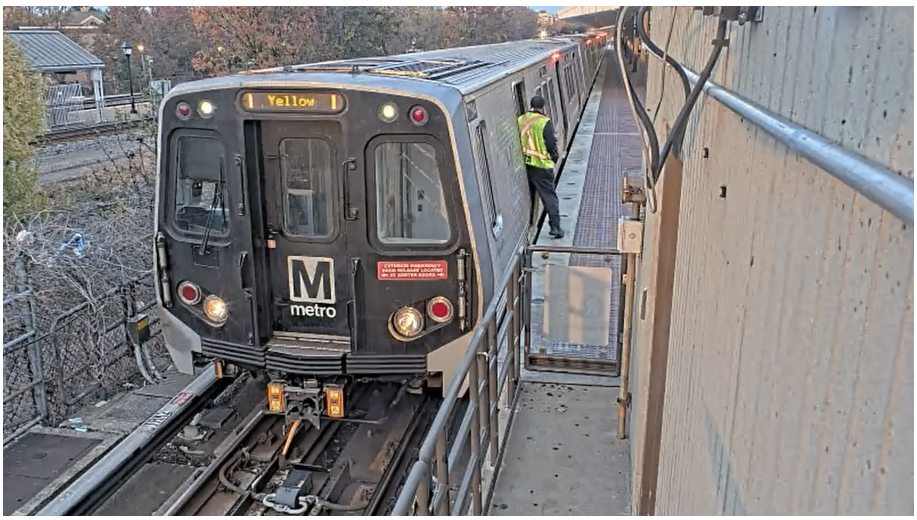


Figure 7 - Depicts RVO #1 exiting the operator's cab without keying down the train.

At 16:23:51 hours, King Street Station CCTV footage showed RVO #1 exiting the operating cab without authorization or keying down the train. RVO #1 immediately returned to the operating cab as the cab door was closing. At 16:24:42 hours, the Radio RTC instructed RVO #1 to make good announcements to their customers that the train was out of service and offload the train. At 16:25:57 hours, the Station Manager arrived on the King Street Station platform and assisted with offloading the mid to rear sections of the train and verifying those areas were clear of customers. At 16:26:21 hours, the Radio RTC granted RVO #1 permission to enter the roadway, on track 2 only, under foul time protection, for the purpose of a ground walkaround inspection of the train. At 16:26:53 hours, RVO #1 keyed down the train, exited the operator's cab, and verified the first two (2) cars of the train was clear of customers. Rail Station CCTV footage showed the RVO met and conversed with the Station Manager and RVO #2 near the second car of the consist. RVO #1 then began to walk back towards the front of the train. At 16:30:00 hours, the Radio RTC contacted RVO #1 to provide an update on the ground walkaround inspection. RVO #1 reported they completed their ground walkaround inspection, there were no issues to report and relinquished their foul time. The Radio RTC instructed RVO #1 to inform them once they arrived at car 7194 at their Huntington Station facing end of the train and to enter non-revenue service Train ID 732.

Once the RVO arrived in the Operator's cab they were instructed to key up and transport the train to Alexandria Yard. RVO #1 was given a lunar aspect at signal C13-06 with a permissive block to no closer than 10 feet of signal C98-06. At 16:32:34 hours, Train ID 732 departed King Street Station towards Alexandria Yard. At 16:34:38 hours, the following Yellow Line train arrived at King Street, track 2, to accommodate the offloaded customers.

In adherence to Standard Operating Procedure 102-01-02, which outlines the protocol for Removing an Employee from Service for involvement in an operational safety event, the Radio RTC dispatched a Rail Supervisor to Alexandria Yard to relieve RVO #1 from duty for post-incident testing.

In accordance with the Office of the CMOR IIT OAP 102.06, the MICC promptly initiated the removal of Train ID 732 from revenue service for post-incident investigative measures. This action adhered to the Rail Vehicle Event Investigation Policy, ensuring a comprehensive examination of the incident.

Chronological Event Timeline

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

Time	Description
16:17:12 hours	RVO #2 alighted Train ID 421 at King Street Station, track 1. Train ID 421 was headed towards Downtown Largo Station. [King Street Station CCTV]
16:20:31 hours	Train ID 332 entered King Street Station, track 2. [SPOTS]
16:20:57 hours	Train ID 332 berthed at the 8-car marker. [King Street Station CCTV]
16:21:00 hours	Train ID 332's Left (**Platform Side**) Doors Opened [King Street Station CCTV]
16:21:04 hours	An unknown customer alighted Train ID 332 and asked RVO #2 for their assistance holding the doors on car 7688 open to allow a customer using a wheelchair to alight the train. [King Street Station CCTV]
16:21:14 hours	The customer using the wheelchair exited the train. [King Street Station CCTV]
16:21:15 hours	Train ID 332's Left (**Platform Side**) Doors Closed [King Street Station CCTV]

Time	Description
16:21:18 hours	RVO #2: Requested for Central to hold the train at King Street Station (Train ID 332). [OPS 3 Radio]
16:21:21 hours	RVO #1 pressed Train ID 332's Right (**Non-Platform Side**) Door Open pushbutton. [Car 7194 Operator Cab CCTV]
16:21:25 hours	Train ID 332's Right (**Non-Platform Side**) Doors Opened. [Train ID 332 Interior CCTV]
16:21:28 hours	Train ID 332's Left (Platform Side) Doors Opened. [King Street Station CCTV][Train ID 332 Interior CCTV]
16:21:29 hours	RVO #2 entered the rear car (7688) of Train ID 332 [King Street Station CCTV][Car 7688 Interior CCTV]
16:21:41 hours	RVO #1 looked into car 7194 from the Operator's cab door window and observed the non-platform side doors opened. [King Street Station CCTV]
16:21:42 hours	RVO #1 pressed Train ID 332's Right (**Non-Platform Side**) Door Closed pushbutton. [Car 7194 Operator Cab CCTV]
16:21:44 hours	RVO #1 looked again into car 7194 from the cab door window. [King Street Station CCTV]
16:21:46 hours	Train ID 332's Right (**Non-Platform Side**) Doors Closed [Train ID 332 Interior CCTV]
16:22:18 hours	RVO #1: Informed the OPS 3 Radio RTC they believed their doors opened off of the platform and requested permission to perform a ground walkaround inspection. Radio RTC: Asked Train 332 RVO for their location. RVO #1: Replied, "King Street, track 2." Radio RTC: Asked Train 332 RVO for their lead car number. RVO #1: Replied, "7194." Radio RTC: Acknowledged the message and instructed RVO #1 to standby. [OPS 3 Radio]
16:22:59 hours	Radio RTC: Asked RVO #1 if the train doors opened on the non-platform side of the train. RVO #1: Stated they believed the non-platform side doors opened but were not 100% sure. RVO #1 went on to state there was an emergency; a Train Operator or uniformed WMATA employee on the platform requested the doors to be re-opened. RVO #1 believed a stroller or child was left on the train and requested the doors to be re-opened. Radio RTC: Repeated if the employee requested the doors to be re-opened. RVO #1: Responded affirmatively. Radio RTC: Asked if there were any Rail Supervisors in the area of King Street Station. [OPS 3 Radio]
16:22:35 hours	RVO #1 looked down the non-platform side of the train from their non-platform side cab window
16:23:29 hours	Button RTC: Informed the Communications Agent that Train ID 332 on track 2 reported doors opened off the platform side at King Street Station. Communications Agent: Acknowledged the transmission with 100% repeat back. [ROIC 2 Phone]
16:23:43 hours	Radio RTC: Called for any ROS in the area of King Street Station. Radio RTC: Asked ROS #1 for their location. Radio RTC: Asked ROS #2 for their location. ROS #1: Stated they were at Reagan National Airport Station.

Time	Description
	Radio RTC: Acknowledged their location and instructed them to report to King Street Station for a possible doors opened off platform incident. Radio RTC: Asked ROS #2 for their location. [OPS 3 Radio]
16:23:57 hours	Communications Agent: Instructed the King Street Station Manager to report to track 2 to assist with a possible train offloading. Station Manager: Asked what happened. Communications Agent: Stated there was a report of doors opened off the platform. Station Manager: Asked if the train was being offloaded. Communications Agent: Stated they were not sure. The Station Manager was instructed to standby on track 2 to assist if it was determined the train was to be offloaded. [ROIC 2 Phone]
16:23:52 hours	RVO #1 exited the operators cab of Train ID 332. [King Street Station CCTV][Car 7194 Interior CCTV]
16:24:02 hours	RVO #1 returned to the operators cab of Train ID 332. [King Street Station CCTV][Car 7194 Interior CCTV]
16:24:37 hours	Communications Agent: Asked the Buttons RTC if Train ID 332's doors opened off the platform side of the train. Button RTC: Stated that RVO #1 was unsure, it was still under investigation and informed the Communications Agent that the train was being offloaded. Communications Agent: Acknowledged the message and stated they were sending the Station Manager upstairs to assist. Button RTC: Acknowledged the message. [ROIC 2 Phone]
16:24:42 hours	Radio RTC: Instructed RVO #1 to offload Train ID 332 and make good announcements to their customers. RVO #1: Acknowledged the message stating they were offloading the train and waiting for a supervisor. Radio RTC: Acknowledged the message and asked ROS #1 for their location. [OPS 3 Radio]
16:25:06 hours	Customers began offloading from Train ID 332. [King Street Station CCTV]
16:25:19 hours	ROS #2: Stated they were at Reagan National Airport Station. Radio RTC: Acknowledged their location and instructed them to also report to King Street Station for a train with doors opened off the platform. ROS #2: Acknowledged the message with 100% repeat back. [OPS 3 Radio]
16:25:19 hours	King Street Station Manager went upstairs from the station mezzanine along with two (2) Alexandria Police Officers. [King Street Station CCTV]
16:25:22 hours	RVO #1 exited the operators cab of Train ID 332. [King Street Station CCTV][Car 7188 Interior CCTV]
16:25:33 hours	RVO #2 exited the train and stood on the platform. [King Street Station CCTV]
16:25:35 hours	Communications Agent: Informed the King Street Station Manager that Train ID 332 was being offloaded. Station Manager: Acknowledged the transmission with 100% repeat back. Communications Agent: Replied affirmatively [OPS 5 Radio]
16:25:39 hours	Radio RTC: Informed RVO #1 that signal C13-06 would be displaying a red aspect. RVO #1: Acknowledge the message. [OPS 3 Radio]
16:25:45 hours	RVO #1 re-entered the operators cab of Train ID 332. [King Street Station CCTV][Car 7194 Interior CCTV]

Time	Description
16:25:47 hours	AOM: Reported a Doors Opened Off-platform incident, at King Street, track 2, to the OM. OM #1: Acknowledged the message and stated Video 1 was retrieving CCTV footage. The OM asked the AOM for the lead car number. AOM: Replied, “the lead car is 7194.” OM #1: Asked how many doors were opened off the platform. AOM: Clarified that doors were opened on the opposite side of the platform. OM #1: Acknowledged the message. AOM: Stated the Radio RTC was granting RVO #1 foul time to perform a ground walkaround inspection and supervisors were enroute. [Rail 1 Phone]
16:25:57 hours	King Street Station Manager arrived on the platform and began assisting with offloading the train from the third to the sixth car. [King Street Station CCTV][Train ID 332 Interior CCTV]
16:26:21 hours	Radio RTC: Radioed for Train ID 332 RVO #1: Acknowledged the message. Radio RTC: Granted RVO #1 foul time for track 2 only at King Street Station to perform a ground walkaround inspection. The Radio RTC instructed RVO #1 to inform them once they the ground walkaround was completed and they were relinquishing their foul time. RVO #1: Acknowledged the message with 100% repeat back. Radio RTC: Acknowledged the response and gave a time of 16:32 hours [OPS 3 Radio]
16:26:22 hours	The King Street Station Manager and RVO #2 began talking and walking towards the front of the train. [King Street Station CCTV]
16:26:59 hours	Station Manager: Informed the Communications Agent that RVO #2 was on location. RVO #2 informed the Station Manager that they were supposed to relieve RVO #1 and wanted to know which direction the train would be moving. Communications Agent: Instructed the Station Manager to have RVO #2 contact an OPS 3 RTC. Station Manager: Acknowledged the message with 100% repeat back. Communications Agent: Replied affirmatively. Station Manager: Informed the Communications Agent that Train ID 332 was clear of customers. Station Manager: Acknowledged the message with 100% repeat back. [OPS 5 Radio]
16:27:05 hours	RVO #1 keyed down the train. [King Street Station CCTV]
16:27:20 hours	RVO #1 exited the operator's cab of Train ID 332 and began walking down the platform. [King Street Station CCTV][Car 7194 Interior CCTV]
16:27:35 hours	Radio RTC: Granted Train ID 334 a permissive block of no closer than 10 feet of signal C12-08 (at Braddock Road Station) displaying a red aspect. The Radio RTC informed Train ID 334 that they would be the first train to single track. Train ID 334 RVO: Acknowledged the message with 100% repeat back. Radio RTC: Replied affirmatively and informed all OPS 3 RVOs of single tracking between Braddock Road Station and King Street Station, via track 1. [OPS 3 Radio]
16:27:51 hours	RVO #1 met with the Station Manager and RVO #2 near car 7195. [King Street Station CCTV]

Time	Description
16:28:03 hours	RVO #1 walked back towards the lead car 7194. [King Street Station CCTV]
16:28:25 hours	RVO #1 re-entered the operator's cab of Train ID 332. [King Street Station CCTV]
16:28:28 hours	RVO #1 keyed up in car 7194. [King Street Station CCTV]
16:28:45 hours	Left Doors Closed pushbutton pressed. [King Street Station CCTV]
16:28:50 hours	Train ID 332's platform side doors closed. [King Street Station CCTV]
16:29:26 hours	OM #2: Asked the AOM who was enroute to King Street Station. AOM: Stated a supervisor was on-scene. They were informed a supervisor was on the platform when the incident occurred, however ROS #2 is enroute. OM #2: Acknowledged the message and asked if the train was ready to be moved once the ground walkaround was completed. AOM: Replied, "Yes." [Rail 2 Phone]
16:29:34 hours	Radio RTC: Asked RVO #1 for an update on the ground walkaround inspection. [OPS 3 Radio]
16:30:00 hours	Radio RTC: Asked RVO #1 for an update on the ground walkaround inspection. RVO #1: Stated they completed their ground walkaround and were relinquishing their foul time. RVO #1 stated, "Everything is clear, track 2, track 2." Radio RTC: Acknowledged the message, stating foul time was relinquished at 16:30 hours and the ground walkaround was clear. Radio RTC: Instructed RVO #1 to update their Train ID to 732 and to inform the Radio RTC once they were on their Huntington Station end of the train, and then to standby. RVO #1: Acknowledged the message and informed the Radio RTC that they were on their Huntington Station end of the train. Radio RTC: Asked RVO #1 if they had the name of the supervisor that boarded the train? RVO #1: [Inaudible message] Radio RTC: Asked RVO #1 if they were keyed up on their Huntington Station end of the train. RVO #1: Replied affirmatively, and stated they were on their Huntington Station end of the train. Radio RTC: Replied affirmatively, and stated the train was being sent into Alexandria Yard. They instructed RVO #1 to verify the lunar aspect at signal C13-06 and granted a permissive block to no closer than 10 feet of signal C98-06. They then instructed RVO #1 to standby for lunar rail readouts. [OPS 3 Radio]
16:30:22 hours	Metro 1: Informed the MICC Director that Train ID 332 stopped short and doors opened off platform at King Street Station, track 2. Supervisor was on location and a ground walkaround inspection was being performed. No injuries were reported. MICC Director: Asked if the RVO stopped short of the platform. Metro 1: Replied yes, they were attempting to retrieve the CCTV video footage to confirm. MICC Director: Asked who reported the incident. Metro 1: Asked MICC personnel who reported the incident and was informed the supervisor on the platform reported the incident. MICC Director: Acknowledged the message.

Time	Description
	Metro 1: Informed the MICC Director that they would provide an update. [Rail 1 Phone]
16:30:39 hours	OM: Asked the AOM if the supervisor was operating the train and if so why was the yard not set up. AOM: Informed the OM that they would call them back. [Rail 2 Phone]
16:31:02 hours	Train ID 332's destination sign went blank indicating the Train ID was changed to 732. [King Street Station CCTV]
16:31:26 hours	Metro 1: Asked Video 1 if they had a view of the doors opened opposite the platform side of the train. Video 1: Stated they were attempting to locate a station camera that viewed through the train to the non-platform side doors, but were unsuccessful. [Rail 1 Phone]
16:31:28 hours	Radio RTC: Replied affirmatively, and stated the train was being sent into Alexandria Yard. They instructed RVO #1 to verify the lunar aspect at signal C13-06 and granted a permissive block to no closer than 10 feet of signal C98-06. They then instructed RVO #1 to standby for lunar rail readouts. [OPS 3 Radio]
16:32:19 hours	RVO #1: Stated Train 732, destination C99 (Alexandria) Yard. Radio RTC: Replied affirmatively, and stated they were sending them to the yard. [OPS 3 Radio]
16:32:34 hours	RVO #1 operated the train to Alexandria Yard. [King Street Station CCTV]
16:34:38 hours	The following Yellow Line Train (Train ID 334) arrived on Track 2. [King Street Station CCTV]

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

Advanced Information Management System (AIMS)

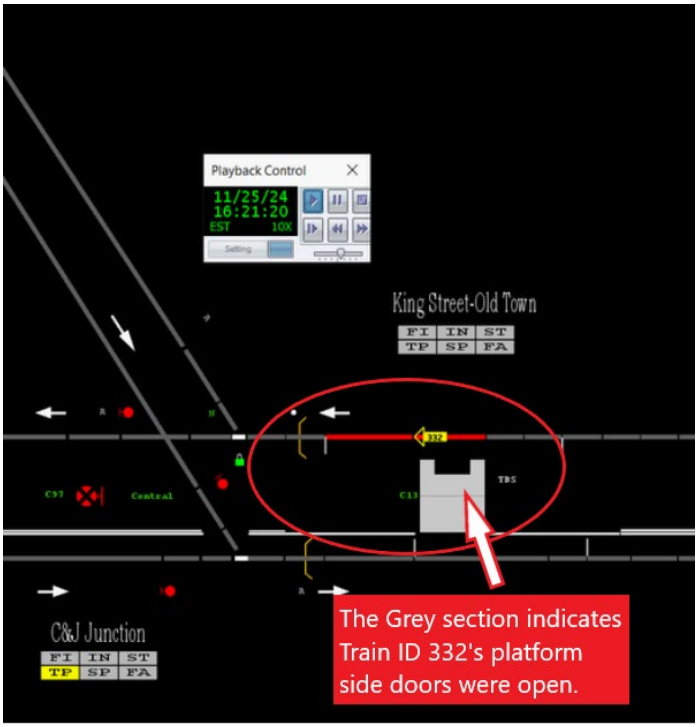


Figure 8 - Indicates Train ID 332 at King Street Station, track 2 with the platform side doors open.

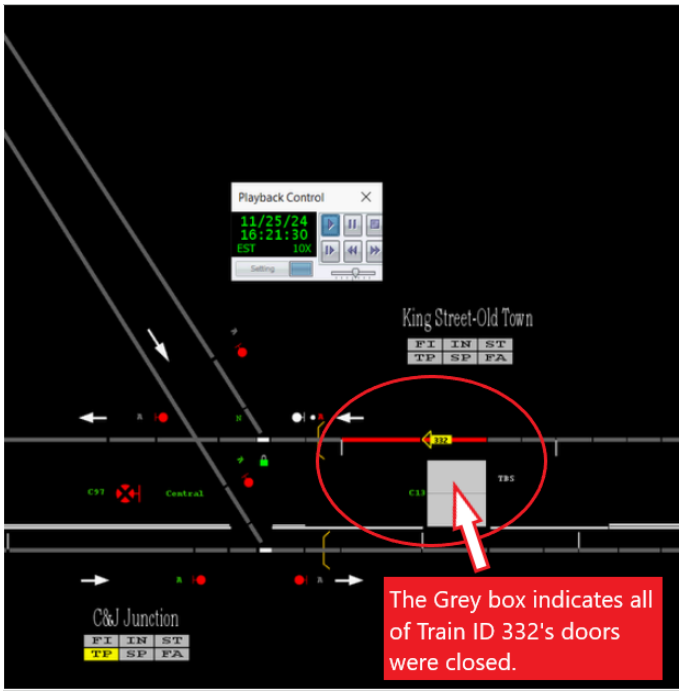


Figure 9 - Indicates Train ID 332 at King Street Station, track 2 with all doors closed.

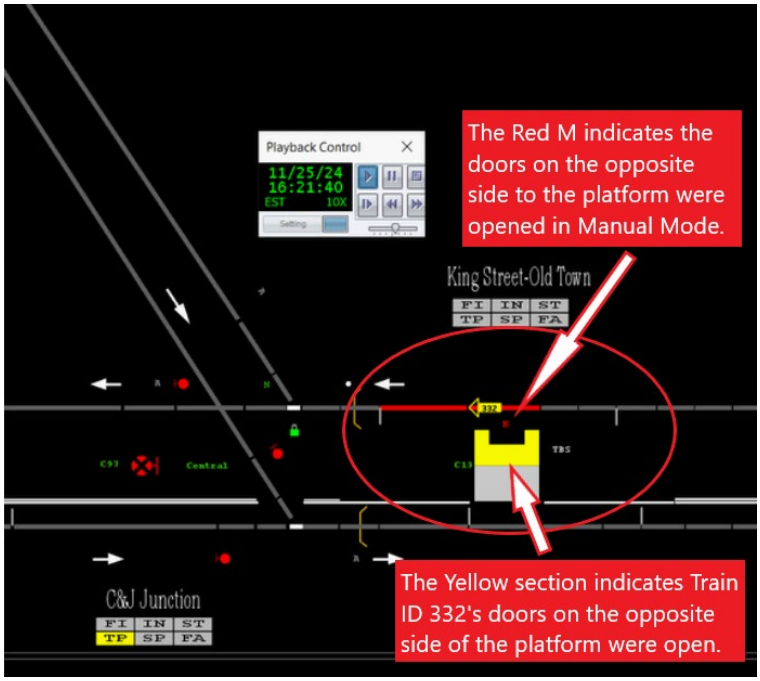


Figure 10 - Indicates Train ID 332 at King Street Station, track 2 with the non-platform side doors open.

Figure 11 - Depicts foul time granted for RVO #1 to conduct a ground walkaround inspection of Train ID 332.

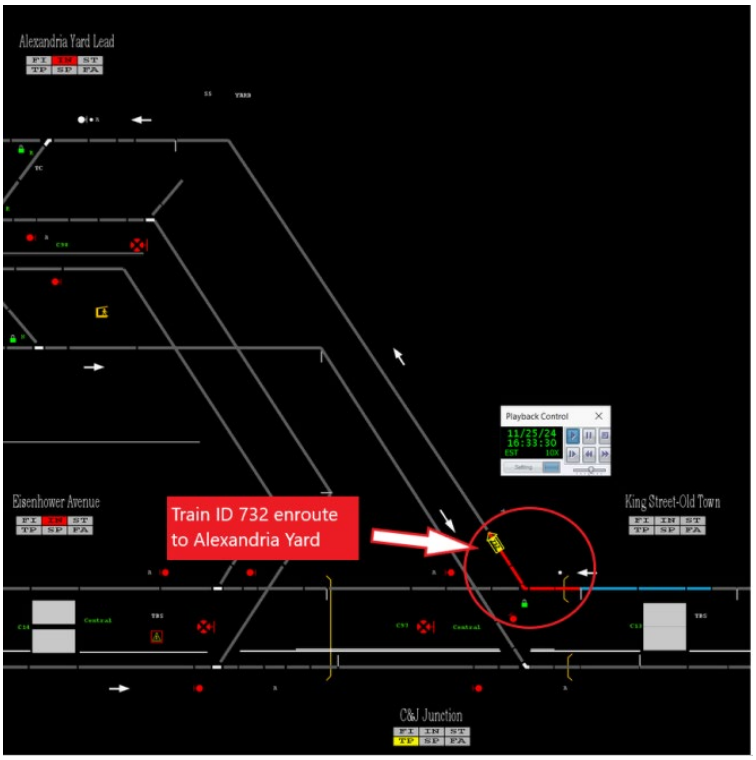


Figure 12 - Indicates Train ID 332 departing King Street Station towards Alexandria Yard.

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 the train ID 332, cars **7194/95x7488/89x7689/88**, reported for Improper Door Operation at King Street Station (C13), track 2 on November 25, 2024. Based on VMS data, Train ID 332 entered King Street Station and came to a complete stop one (1) foot before 8-car marker.

As the train stopped, the Train Berthed Pushbutton was activated, opening the left side doors on the platform side. The left side doors closed 12.57 seconds later via the Left Door Close pushbutton. Approximately 10 seconds later, the Right Door Open pushbutton was activated, opening the right side doors on the side opposite the platform. 5.79 seconds later, the Left Door Open pushbutton was activated, opening the left side doors once again.

The right side doors were commanded to close via the Right Door Close pushbutton. Lead car 7194 was then keyed down and keyed back up. The Left Door Close pushbutton was activated, closing the left side doors. Once all doors were closed, the Master Controller was placed in a the “P5” Power mode and the train was removed from service.

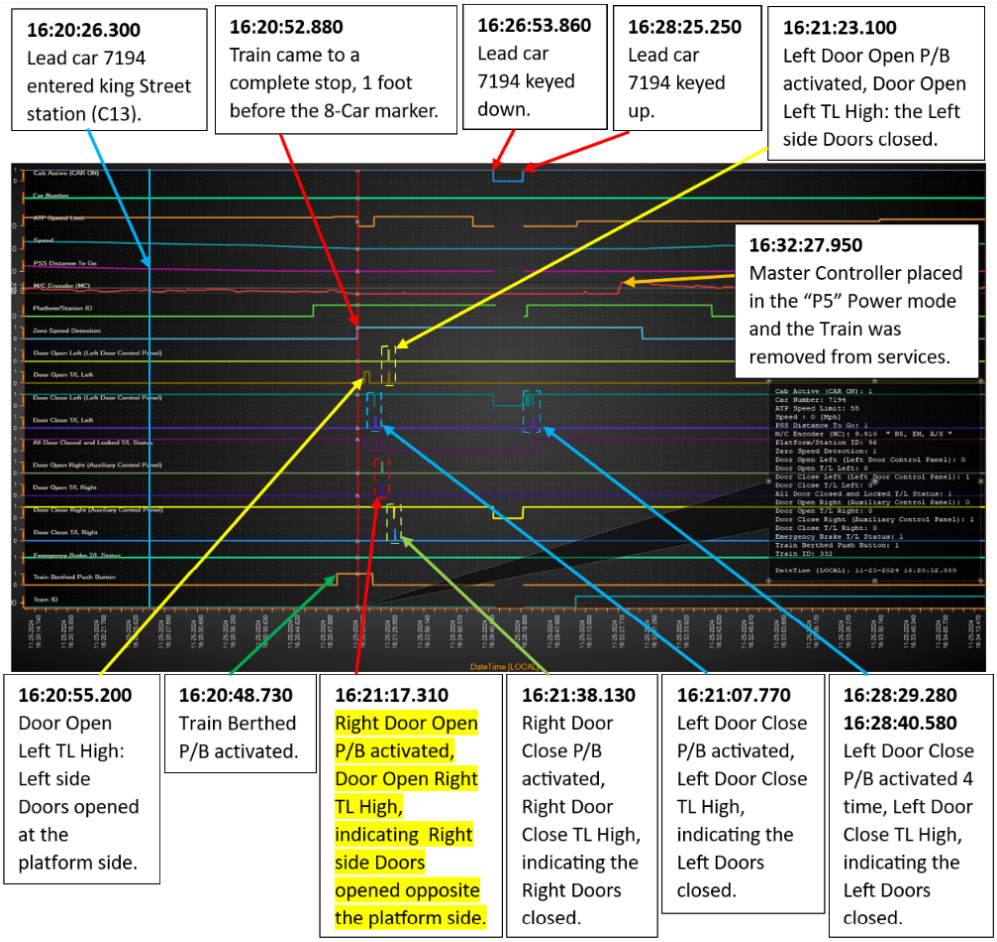
See below timeline of events and data analysis:

TIMELINE OF EVENTS

Time	Description of Events
16:20:26 hours	Train ID 332 entered King Street Station on track 2.
16:20:48 hours	Train Berthed pushbutton activated.
16:20:52 hours	Train came to a complete stop, 1 foot before the 8-Car marker at King Street Station.
16:20:55 hours	Door Open Left Trainline signal went High, indicating the Left side Doors opened at the platform side.
16:21:07 hours	Left Door Close Pushbutton activated, Left Door Close Trainline went High, indicating the left side doors closed.
16:21:17 hours	Right Door Open pushbutton activated. Right Door Open Trainline signal went High, indicating the right side doors opened opposite the platform side.
16:21:23 hours	Left Door Open pushbutton activated. Left Door Open Trainline signal went High, indicating the left side doors opened.
16:21:38 hours	Right Door Close pushbutton activated, Right Door Close Trainline went High, indicating the right side doors closed.
16:26:53 hours	Lead car 7194 was keyed down.
16:28:25 hours	Lead car 7194 was keyed up.
16:28:29 hours 16:28:40 hours	Left Door Close pushbutton was activated four (4) time. Left Door Close Trainline went High, indicating the left side doors closed.
16:32:27 hours	Master Controller was placed in the “P5” Power mode and the train was removed from service.

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

7194 Event Recorder (ER) GRAPH



Office of the Communications and Signaling (COSI), Automatic Train Control Engineering (ATCE)

Adopted from COSI ATCE report with minor formatting and grammatical edits:

A collection and analysis of AIMS data shows that on November 25th, at approximately 16:21:00 hours, Train ID 332 berthed at King Street Station, track 2 (C13-2 platform). AIMS data and SPOT report data showed the train exhibiting destination code "31" for Huntington Station.

At approximately 16:21:25 hours, Train ID 332's left side doors were opened in Auto mode, and at 16:21:25, (approximately 21 seconds later) the right side doors, opposite the platform, were opened Manually.

At approximately 16:21:31 hours, the right side doors closed; six (6) seconds after being opened. At this time AIMS data and SPOT reports both left and right side doors opened.

At approximately 16:28:53 hours, all doors were closed. At 16:33:01 hours, with all doors closed, Train ID 332 was changed to ID 732. The train cleared King Street Station, track 2, with destination code 99, to Alexandria Yard.

Reported Data:			Time:10:55			Train ID	332
Description: Improper Route	D98 (D & G Junction)			Interlocking Control: LOCAL			
Requested Analysis: Investigate Incident							
INITIAL STATE AS OF: [1600:00 to 17:00:00]							
Name	STATE	AUTO	NAME	STATE	AUTO	NAME	STATE	AUTO
TWC	ON	-	-	-	-	-	-	-
9AAT	Vacant	-	-	-		-	-	-
13AAT	Vacant	-	-	-	-	-	-	-

RECORDED EVENT DATA				
TIME	LOCATION	STATUS/ CONTROL	AIMS DESCRIPTION	COMMENTS
16:20:24	C13	STATUS	Track Circuit C2-554 Occupied	Train drops C2-554 on approach to C13 platform 2
16:20:31	C13	STATUS	Track circuit C2-562 Occupied	Train 332 occupies C13-2 platform with destination code 31
16.20.55	C13	STATUS	Train 332 is Berthed - Berthed. Door manual operation - 0	Train is berthed at Platform 2, and door operation is not in manual
16.21.00	C13	STATUS	Track 2 Doors close – 3. Train Motion – NOT Motion	No train movement. All doors are closed.
16.21.04	C13	STATUS	Left door open. Door Manual - 0	Left side door opened in auto
16.21.24	C13	STATUS	Right side door open. Door opening mode - Manual	Train 332 right side doors manually opened
16.21.29	C13	STATUS	Track 2 door Opening Mode – Manual	Manual operation detected on TRK-2
16.21.31	C13	STATUS	Track 2 Door Close – Both Open	Both left and right side doors are manually opened at this time
16.21.31	C13	STATUS	Track 2 door Opening Mode – Auto. Right door close	Right side door closed automatically
16:28:53	C13	STATUS	Track 2 Door Close Both Sides	SPOT report and AIMS show both sided doors close on both sides of
16.33.01	C13	STATUS	Train ID 732	SPOT report shows train 332 changes ID to 732 with destination code 99 to C99

Office of Systems Maintenance, Office of Radio Communications

The Office of System Maintenance, Office of Radio Communications, conducted a comprehensive radio check at King Street Station under Maximo Work Order #19119978. They reported a known radio frequency interference issue at the station that cannot be corrected with the current radio network configuration.

Office of Rail Transportation

Adopted from RTRA Managerial Investigation report with minor formatting and grammatical edits:

Brief Description:

Rail Vehicle Operator opened doors off the platform side at King Street Station, track 2.

Key Employees Involved and Employee Statements:

The RVO stated, “I was servicing King Street track 2 after I closed the doors, I heard someone over the radio say central tell the train on platform to open back up the doors I looked back down the side of the train and saw a group of people standing by the train doors waving yelling to open back up the doors I was nervous scared that someone child was stuck in the doors, I attempted to re-open the doors.”

Post-Incident Testing and Employee History:
The RVO was transported for post-incident testing. The RVO has been employed with WMATA since October 15, 2012, and first became qualified as an RVO on March 1, 2020. The RVO was disqualified on May 10, 2022. They returned to Rail Operations as an RVO; and requalified on November 15, 2024.

System Performance On-Time Summary (SPOTS) Report

ROCS SPOTS REPORT

based on up-to-the-second operational performance data from the Rail Operations Control System

Current date/time: Tue Nov 26 11:57:51 2024

Select Platform: C13-2 and/or Select ID: Leave blank to remove criteria

and/or Select 4-digit car number: Leave blank to remove criteria

Select Date: Nov 25 2024 Select Times (0-24HRS): From 15:00 To 17:00

Generate Report

ID	Platform	length	dcode	Right door open	Right door close	dwell	Left door open	Left door close	dwell	Head Arrived	Tail cleared	cars	Headway door open to door open
312	C13-2	6	31				15:02:20	15:02:37	17	15:01:52	15:03:00	6128-6129.6175-6174.6087-6086	-
402	C13-2	8	16				15:05:16	15:05:39	23	15:04:45	15:06:09	3023-3022.3117-3116.3018-3019.3041-3040	2:56
314	C13-2	6	31				15:07:55	15:08:12	17	15:07:23	15:08:40	7194-7195.7488-7489.7689-7688	2:39
404	C13-2	6	16				15:17:02	15:17:24	22	15:16:33	15:17:48	6158-6159.6178-6179.6097-6096	9:07
316	C13-2	6	31				15:20:13	15:20:30	17	15:19:31	15:20:50	6118-6119.6155-6154.6181-6180	3:11
318	C13-2	8	31				15:22:56	15:23:11	15	15:22:27	15:23:37	7676-7677.7517-7516.7720-7721.7729-7728	2:43
406	C13-2	8	16				15:25:01	15:25:18	17	15:24:30	15:25:51	7524-7525.7245-7244.7198-7199.7299-7298	2:05
320	C13-2	6	31				15:34:02	15:34:39	37	15:33:32	15:35:03	6071-6070.6022-6023.6126-6127	9:01
408	C13-2	8	16				15:37:24	15:37:43	19	15:36:57	15:38:19	7156-7157.7183-7182.7160-7161.7141-7140	3:22
322	C13-2	8	31				15:40:01	15:40:17	16	15:39:23	15:40:41	7526-7527.7327-7326.7712-7713.7719-7718	2:37
324	C13-2	6	31				15:48:35	15:48:50	15	15:47:59	15:49:12	7716-7717.7558-7559.7547-7546	8:34
410	C13-2	8	16				15:50:40	15:50:56	16	15:50:09	15:51:26	7536-7537.7679-7678.7564-7565.7607-7606	2:05
326	C13-2	6	31				15:58:01	15:58:15	14	15:57:30	15:58:33	7568-7569.7668-7669.7443-7442	7:21
328	C13-2	6	31				16:08:13	16:08:34	21	16:07:40	16:08:56	6042-6043.6041-6040.6111-6110	10:12
412	C13-2	8	16				16:09:56	16:10:11	15	16:09:24	16:10:37	7584-7585.7705-7704.7626-7627.7685-7684	1:43
330	C13-2	6	31				16:14:52	16:15:14	22	16:14:17	16:15:36	6128-6129.6175-6174.6087-6086	4:56
414	C13-2	8	16				16:17:34	16:17:51	17	16:17:03	16:18:19	7256-7257.7353-7352.7186-7187.7259-7258	2:42
732	C13-2	6	99	16:21:25	16:21:31	6	16:21:04	16:28:53	469	16:20:31	16:33:01	7194-7195.7488-7489.7689-7688	3:30
334	C13-2	6	31				16:34:48	16:35:24	36	16:34:11	16:35:55	6118-6119.6155-6154.6181-6180	13:44
416	C13-2	6	16				16:37:12	16:37:35	23	16:36:35	16:37:58	7484-7485.7362-7363.7449-7448	2:24
336	C13-2	8	31				16:39:35	16:39:52	17	16:39:03	16:40:17	7676-7677.7517-7516.7720-7721.7729-7728	2:23
338	C13-2	6	31				16:41:59	16:42:14	15	16:41:31	16:42:41	6020-6021.6028-6029.6108-6109	2:24
418	C13-2	0	16							16:43:08	16:44:23	7366-7367.7388-7389.7491-7490	-
340	C13-2	6	31				16:46:49	16:47:04	15	16:46:06	16:47:28	6071-6070.6022-6023.6126-6127	4:50
420	C13-2	6	16				16:53:25	16:53:44	19	16:52:50	16:54:10	7108-7109.7641-7640.7497-7496	6:36
342	C13-2	8	31				16:55:39	16:55:54	15	16:55:08	16:56:17	7526-7527.7327-7326.7712-7713.7719-7718	2:14

Figure 13 - Depicts Train ID was at King Street Station, track 2 from 16:20:31 hours to 16:33:01 hours. The non-platform side doors were open from 16:21:25 hours to 16:21:31 hours.

Interview Findings and Written Statements

As part of the investigation launched into the event, Safety interviewed three (3) people. The interviews identified the following key findings associated with this event. The findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

RVO #1 (Written Statement Findings)

"I was servicing King Street, track #2. After I closed the doors, I heard someone over the radio say Central tell the train on the platform to open back up the doors. I looked back down the side at the train and saw a group of people standing by the train doors, waving and yelling to open back the doors. I was nervous, scared that someone's child was stuck in the doors. I attempted to reopen the doors."

RVO #1 (Interview Findings)

- Recertified as a Rail Vehicle Operator (RVO) one week prior to the incident.
- Observed a WMATA employee standing at the end of the platform while entering King Street Station on track 2.
- Serviced the station at the 8-car marker, observed the platform, and closed the doors after ensuring all passengers had exited.
- While returning to their operator's seat, they heard a frantic radio call requesting the doors be reopened on track 2.
- Manually reopened the doors, believing someone from the group exiting might still be on board or caught in the doors.
- Stated they accidentally pressed the "Right Door Open" pushbutton while bracing themselves and attempting to press the "Okay" pushbutton.
- Upon returning to their seat, noticed the non-platform side doors had opened and immediately closed them.
- Contacted the MICC and reported a potential off-platform door opening.
- Observed two (2) Station Managers assisting with clearing the train.
- Outlined the process for a good ground walkaround inspection.
- Stated they did not enter the roadway on the non-platform side due to accessibility challenges at King Street Station.
- Stated no supervision arrived at the scene due to being on trains behind the incident.
- Was instructed by the Radio RTC to move the train to Alexandria Yard.

RVO #2

- Was at King Street Station, waiting for a Yellow Line train to Huntington Station to make a relief.
- While boarding the train on track 2, RVO #2 noticed a customer using a wheelchair having difficulty exiting the train.
- Assisted with holding the train doors open for the customer; after the customer exited, the doors closed.
- Radioed OPS 3 to request the Radio RTC hold the train to allow them to board.
- Upon entering the train after the doors reopened, RVO #2 realized that doors on both sides of the train were open.
- RVO #2 became aware the incident train was the one they were assigned to relieve at Huntington Station after hearing RVO #1 report their Train ID.
- Stated they did not assist RVO #1 or the Station Manager with offloading the train or performing a ground walkaround inspection.
- Stated they exited the train along with other customers.

Station Manager

- Received a call from the Communications Agent about offloading the train on track 2.
- Assisted with clearing the train of customers and informed the OPS 5 Communications Specialist once completed.
- An RVO on the platform informed the Station Manager that this was the train they were assigned to relieve at Huntington Station.
- The Station Manager relayed this information to the Communications Agent, who instructed the RVO to contact the OPS 3 RTC.
- Station Manager spoke with RVO #1 at the front of the train, who stated they were instructed to take the train to the yard.
- Station Manager did not enter the roadway or observe RVO #1 entering the roadway.
- Heard RVO #1 advise the Radio RTC that everything was clear.

Weather

On November 25, 2024, at the time of the incident, NOAA recorded the temperature as 54°F, with partly cloudy skies, winds 7.4 mph, and 60% humidity. [Alexandria, VA]. Weather was not a contributing factor in this incident (Weather source: NOAA) – Location: [Alexandria, VA].

Related Rules and Procedures

Metrorail Operating Rulebook, Effective September 1, 2023

Protection of Rail Vehicles

9.7 Unattended Rail Vehicles

9.7.1 When the operating controls of any rail vehicle are left unattended, the vehicle shall be properly secured.

9.7.2 While on the mainline, Rail Vehicle Operators shall not leave an operating console of a Class 1 rail vehicle unattended without notifying the Rail Traffic Controller.

SOP 40 Procedure for Platform Berthing, Station Servicing and Overruns; Revision 0, dated August 15, 2023

6.2 Door Opening Procedures

6.2.3 When the Door Mode Selector is in the Manual/Manual position, the Rail Vehicle Operator shall:

6.2.3.1 Use extreme caution before depressing the Open Doors pushbutton;

6.2.3.2 Ensure the train is properly berthed on the platform;

6.2.3.3 Verify the platform side of the train by placing their head out of the cab window and first look and identify the platform;

6.2.3.4 Look at the doors on the platform side of the train to observe any activity in front of the doors, with hands to their side for five (5) seconds;

6.2.3.5 Depress the Open Doors pushbutton on the platform side of the train;

6.2.3.6 (Additional step only for 7000 Series Fleet) Depress the console 'Ok' pushbutton on the Aspect Display Unit;

6.2.3.7 (Additional step only for 7000 Series Fleet) Depress the 'Open Doors' pushbutton on the platform side of the train.

Human Factors

Fatigue

Signs and Symptoms of Fatigue

SAFE evaluated incident data for fatigue risk factors that may have been present at the time of the incident. No signs or symptoms of fatigue were detected from the available data. Video of the incident was reviewed for signs of RVO #1's fatigue. No signs or symptoms of fatigue were evident from the video. Employee reported feeling fully alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

SAFE evaluated incident data for fatigue risk factors. Risk factors for fatigue were not present. The incident time of day did not suggest an increased risk of fatigue-related impairment. RVO #1 reported keeping a regular sleep schedule in the days leading up to the incident. The employee worked AM shifts in the days leading up to the incident. The employee was awake for 12.35 hours at the time of the incident The off-duty period preceding incident was less than 10 hours long (9 hours) which may impact the opportunity for sufficient sleep, however, the employee reported 7.5 of sleep in the 24 hours preceding the incident. This was a comparable amount to the employee's usual workday sleep durations. The employee reported no issues with sleep. The employee worked AM shifts in the days leading up to the incident.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that RVO #1 complied with the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Findings

- The RVO #1 entered the King Street Station in Auto/Manual Mode.
- The RVO #1 pressed the Train Berth pushbutton activating Automatic Door Operations for the platform side (left) doors.
- The RVO #1 serviced the station and closed the platform side doors.
- RVO #2 used their handheld radio requesting the OPS 3 Radio RTC to have Train ID 332 hold their location.
- RVO #1 manually pushed the Right Door Open pushbutton, opening the non-platform side doors of the train.
- RVO #1 observed the non-platform doors open and manually pressed the Right Door Closed pushbutton.
- RVO #1 exited the operator’s cab without keying down the train.

Immediate Mitigation to Prevent Recurrence

- In accordance with Standard Operating Procedure 102-01-02, RVO #1 was relieved from duty for post-incident testing at Alexandria Yard.
- Per the Office of the Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) Operations Administrative Policy (OAP) 102.06, the MICC removed Train ID 732 from service for a comprehensive investigation.

Probable Cause Statement

The probable cause of the improper door operation event at King Street Station on November 25, 2024, was RVO #1's lack of situational awareness and deviation from established procedures. Specifically, RVO #1 failed to follow the established procedures in SOP 40, section 6.2 Door Opening Procedures.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
121720_SAFECAPS_RTRA_001	RVO #1 is to complete refresher training with an emphasis on Door Operation (RC-1)	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.

Rail Vehicle Operator (RVO) #1

RVO #1 is a WMATA employee with 12 years of service and two (2) total years of experience as a Rail Vehicle Operator. RVO #1 holds a Roadway Worker Protection (RWP) Level 2 certification that expires in July 2025.

During the formal interview, the RVO #1 stated that they recertified as a Rail Vehicle Operator one (1) week prior to the incident. The RVO previous title was Bus Operator. The RVO was asked fatigue related questions and reported feeling fully alert and experienced no fatigue related symptoms prior to the incident. During the incident RVO #1 states as they were entering King Street Station, on track 2, they observed a WMATA employee standing at the trailing end of the platform. RVO #1 continued to the 8-car marker. RVO #1 serviced the station, looked out of the operator's window down the platform and closed the doors. As they were walking back to the operator's seat they heard someone yelling frantically over the radio for Central to instruct the train on track 2 to reopen their doors.

RVO #1 stated when they were observing the platform, before closing the doors, the observed what they believed to be a group of people or a family with either a stroller or wheelchair exiting the rear of the train. They observed the wheelchair or stroller exit the train to the platform, however, when they heard the request to reopen the doors, RVO #1 believed that someone in the group may have remained aboard the train or caught between the train doors. The RVO then proceeded to manually reopen the doors. RVO #1 then looked out of the window on the platform side and did not observe anything unusual. RVO #1 stated they then walked back towards the operator's seat, while monitoring their radio and inadvertently pushed the Right Door Open pushbutton while bracing themselves against the wall attempting to press the "Okay" pushbutton on their console. They then went back towards the platform side cab window to check the platform once more. When they were returning to the operator's seat for a second time, they observed the non-platform side doors open. They immediately pressed the Right Door Closed pushbutton.

RVO #1 then contacted the MICC via their radio and reported they thought the doors may have opened off the platform and requested permission to perform a ground walkaround inspection. They looked out of the non-platform side cab window and did not observe anything unusual, reported their findings to the Radio RTC, and was instructed to offload the train and perform a ground walkaround inspection. RVO #1 stated they offloaded the train, leaving the platform side doors open, keyed down, and began their ground walkaround inspection. As they were walking towards the rear of the train they observed two (2) Station Managers assist with clearing the train of customers.

When asked RVO #1 stated they did not know the employee that was standing towards the rear of the platform as they entered the station. RVO #1 stated this was not their regular assignment; their assignment changes daily.

When asked why they believed the radio announcement requesting to hold the train on track 2 referred to their train, RVO #1 recalled the person stating King Street, track 2.

When asked to describe the process of a ground walkaround inspection, RVO #1 stated the steps were to:

1. Clear the train.
2. Make good announcements.
3. Key down.
4. Close the train doors.
5. Walk through the train.
6. Verify clear of customers.
7. Start the ground walkaround.

RVO #1 stated they did not enter the roadway to check the non-platform side of the train. They stated at King Street Station it is harder to get to the roadway than at other stations. They stated the looked through the window on the non-platform side of the train, in between cars, and asked customers if there was anyone reported missing.

When asked, RVO #2 stated no supervision had arrived on location during the incident, because they were aboard trains behind the incident train and could not get to the location. The Radio RTC instructed them to transport the train to Alexandria Yard. Once they arrived at Alexandria Yard the Interlocking Operator instructed to wait at the Administrative Building for supervision.

RVO #2

RVO #2 is a WMATA employee with six (6) years of service and nine (9) total months of experience as a Rail Vehicle Operator. RVO #2 holds a Roadway Worker Protection (RWP) Level 2 certification that expires in November 2025.

During the formal interview, the RVO #2 stated they were at King Street Station, waiting for a Yellow Line train to Huntington Station to make a relief. They were boarding the train on track 2 when a customer aboard the train using a wheelchair was experiencing some difficulty exiting the train. RVO #2 held the train doors opened for the customer and as they exited the train doors closed. RVO #2 radioed OPS 3 and requested that the Radio RTC hold the train so they could board in order to make their relief on time. The train doors reopened and when they entered the train RVO #2 realized the doors on both sides of the train were open.

When asked if they notified RVO #1 or the Radio RTC once they realized the non-platform side doors were opened they stated that they did not.

When asked if they knew the incident train was the train they were due to relieve at Huntington Station, RVO #2 stated they became aware after they heard RVO #1 state their Train ID when reporting the incident. Their focus was to get to Huntington Station to make their relief on time.

When asked if they assisted RVO #1 with offloading the train or performing a ground walkaround inspection, RVO #2 stated they did not. They offloaded themselves with the rest of the customers.

Station Manager

The Station Manager is a WMATA employee with 24 years of service and 11 total years of experience as a Rail Vehicle Operator. RVO #2 holds a Roadway Worker Protection (RWP) Level 2 certification that expires in August 2025.

During the formal interview, the Station Manager stated they received a call from the Communications Agent who informed them that the train on track 2 needed to be offloaded. The Station Manager went to the platform to assist with offloading the train. Once the train was clear of customers they informed the OPS 5 Communications Specialist. During that time an RVO on the platform informed the Station Manager that this was the train they were due to relieve at Huntington Station. The Station Manager relayed the information to the Communications Agent and was instructed to have the RVO contact the OPS 3 RTC. The Station Manager then walked towards the front of the train and spoke with RVO #1 and was informed that they were instructed to bring the train to the yard.

When asked the Station Manager stated they did not enter the roadway or observe RVO #1 enter the roadway. They did hear RVO #1 advise the Radio RTC that everything was clear.

Appendix B – RVO #1's Written Statement

WMATA/RTRA Incident/Accident Report (Other than Motor Vehicle) Page ___ of ___

Incident Information: This page must be completed for all incidents

Date:	Incident Time:	Time Reported:	Reported by: Customer ☐ Employee ☑ ROCC ☐ Other ☐
11/25/24	4:20 pm	4:21 pm	

Location

Station:	Mezzanine #:	Track #/Destination	Chain Marker/Signal Number
King St	N/A	#2	N/A

TYPE OF INCIDENT

☐ Property Damage	☐ Smoke	☐ Fire	☐ Customer Complaint
☐ Customer injury	☐ Customer Illness	☐ Employee Injury	☐ Employee Illness
☐ Criminal Activity	☐ Elevator Entrapment	☐ Rail Vehicle Incident	☐ Other (Explain in description of incident)

WEATHER	LIGHT CONDITIONS (natural lighting)	LIGHTING (artificial lighting)
Clear ☑ Rain ☐	Dawn/Dusk ☑ Daylight ☐	Lights On ☑ Lights Off ☐
Snow ☐ Sleet/Ice ☐	Dark ☐ Tunnel/Underground ☐	Lights Not Working ☐

STATION INCIDENTS: Always include equipment number you use for MOC/AFC/EOC

Elevator/Escalator#:	AFC #:	Room Number/Location:

Failure Number(s):

Parking Lot ☐ Paid Area ☐ Free Area ☐ Garage ☐ Station Entrance ☐ Stairway # ____☐ Platform ☐ Ancillary Room ☐
Injury/Illness reported aboard Train ☐ Other ☐ _____

Name of Responding Supervisor:	Name/Department of PLNT/AFC or other WMATA responder

TRAIN INCIDENTS

Train ID	Destination	Car Numbers(list all cars in consist):	Lead Car:
#2	Huntington		

Name of Responding Supervisor: [redacted]	Name/Department of CMNT/TRST or other WMATA responder

DESCRIBE THE INCIDENT: Include what you did to correct the problem and who you notified and when.
Describe any property damage and the extent of any injuries.

I was servicing King St Track #2 After I closed the doors, I Heard Someone over the Radio say Central Tell the Train on Platform to open Back up the doors. I Looked back down the side of the train and Saw a group of people standing By the train doors, waving yelling to open Back up the doors. I was nervous, scared that someone child was stuck in the doors. I attempted to Re open the doors.

Employee Completing Report

Employee Name:(print) [redacted]	Employee Signature (sign) [redacted]	Employee #: [redacted]	Date: 11/25/24
Division: Alex	Run # 207	Block # 2nd	Assigned Days: Fri / Sat

To Be Completed By Reviewing Manager

Supervisor Name:(print) [redacted]	Supervisor Signature [redacted]	Employee # [redacted]	Date: 25 Nov 24
Action taken/needed: Filled			

SMS Number: 20241125#12720

50.753A 04/12 White Copy: Division or Supervisor Yellow Copy: For any incident involving escalators or elevators; remains in kiosk for use of elevator/escalator inspectors

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Incident Status: PRELIMINARY

GENERAL INCIDENT INFORMATION

Incident Type:	Doors open opposite side of platform	Delay (Minutes):	None
Incident Date:	Monday, November 25, 2024	Vehicles Involved:	L-7194 x 7488 x 7689
Incident Time:	16:23	First Reported By:	MICC
Location:	King Street Track #2		

BRIEF DESCRIPTION:

Train operator [redacted] # [redacted] open doors of platform side at King Street Track #2

Key Employees Involved & Employee Statements:

I was servicing King Street track 2 after I closed the doors, I heard someone over the radio say central tell the train on platform to open back up the doors I looked back down the side of the train and saw a group of people standing by the train doors waving yelling to open back up the doors I was nervous scared that someone child was stuck in the doors, I attempted to re-open the doors.

Post Incident Testing & Employee History:

Train Operator [redacted] # [redacted] was transported for post-incident testing.
Train Operator has been employed with WMATA since 15 October 2012 and train operator since 01 March 2020. Train operator was disqualified on 10 May 2022 and returned to trains on 15 November 2024

Office of Rail Transportation: Managerial Incident Investigation Report Page 1 of 3

Figure 14 - RTRA Managerial Incident Investigation Report, page 1 of 2.

Washington Metropolitan Area Transit Authority

Office of Rail Transportation: Managerial Incident Investigation Report

Report Prepared by: [redacted] 11/25/2024

Report Reviewed by:

Office of Rail Transportation: Managerial Incident Investigation Report Page 3 of 3

Figure 15 - RTRA Managerial Incident Investigation Report, page 2 of 2.

	Washington Metropolitan Area Transit Authority	
metro	INVESTIGATION REPORT	FORM: INFR-COSI-ATCE-INCIDENT ANALYSIS Improper Door Operation – Wrong Side Opening – C13

SIGNAL ENGINEERING INVESTIGATION REPORT

REQUEST NUMBER: IR C13 - 11-25-2024 001

REQUESTER: [redacted] **(SAFE)**

DATE: 2024-DEC-04, 2024
BY: [redacted]
COSI – SIGNAL ENGINEERING

Original
12/04/2024

INFR-COSI-ATC-TEMP-01-00 Signal Engineering Incident Analysis 0.0
Page 1 of 4
C13 Improper Door Operation_Incident Analysis Report 0.0-120424

Figure 16 - COSI-ATCE Incident Investigation Report, page 1 of 4.

	Washington Metropolitan Area Transit Authority	
metro	INVESTIGATION REPORT	FORM: INFR-COSI-ATCE-INCIDENT ANALYSIS Improper Door Operation – Wrong Side Opening – C13

Incident Title: Train 332 Wrong side door opening

Incident Date/Time: DEC 4th , 20224 16:21:00

Incident Location: King St. (C13 Platform-2)

EXECUTIVE SUMMARY:

A collection and analysis of AIMS data shows that on November 25th, at approximately 16:21:00, train ID 332 occupied berthed on C13-2 platform (Platform 2). AIMS data and SPOT report showed train carrying destination code 31 for Huntington.

At approximately 16:21:25, train 332 left door opened in auto mode, and then at 16:21:25, approximately 21 seconds later, the right (wrong side) door opened manually.

At approximately 16:21:31 the right door was closes after 6 secs (16:21:31). At this time AIMS data and SPOT reports both left and right side doors opened.

At approximately 16:28:53, both doors are closed. At 16:33:01, doors on both sides on track two are closed, train 332 changes ID to 7332 and clears C13 platform two, with destination code 99 to Alexandria Rail Yard.

Figure 17 - COSI-ATCE Incident Investigation Report, page 2 of 4.

Washington Metropolitan Area Transit Authority		
	INVESTIGATION REPORT	**FORM: INFR-COSI-ATCE-INCIDENT ANALYSIS** **Improper Door Operation – Wrong Side Opening – C13**

COSI-SIGNAL ENGINEERING	**Washington Metropolitan Area Transit Authority**	**Detailed Incident Analysis**	
		Report Num:	IR C13 - 11-25-2024 001
		Requestor:	[redacted], SAFE
		Date:	December 4, 2024
		From:	[redacted]
		To:	[redacted]

Reported Data:		Time:10:55		Train ID	332
Description: Improper Route	D98 (D & G Junction)		Interlocking Control: LOCAL		
Requested Analysis: Investigate Incident					
INITIAL STATE AS OF: [1600:00 to 17:00:00]					

Name	STATE	AUTO	NAME	STATE	AUTO	NAME	STATE	AUTO
TWC	ON	-	-	-	-	-	-	-
9AAT	Vacant	-	-	-	-	-	-	-
13AAT	Vacant	-	-	-	-	-	-	-

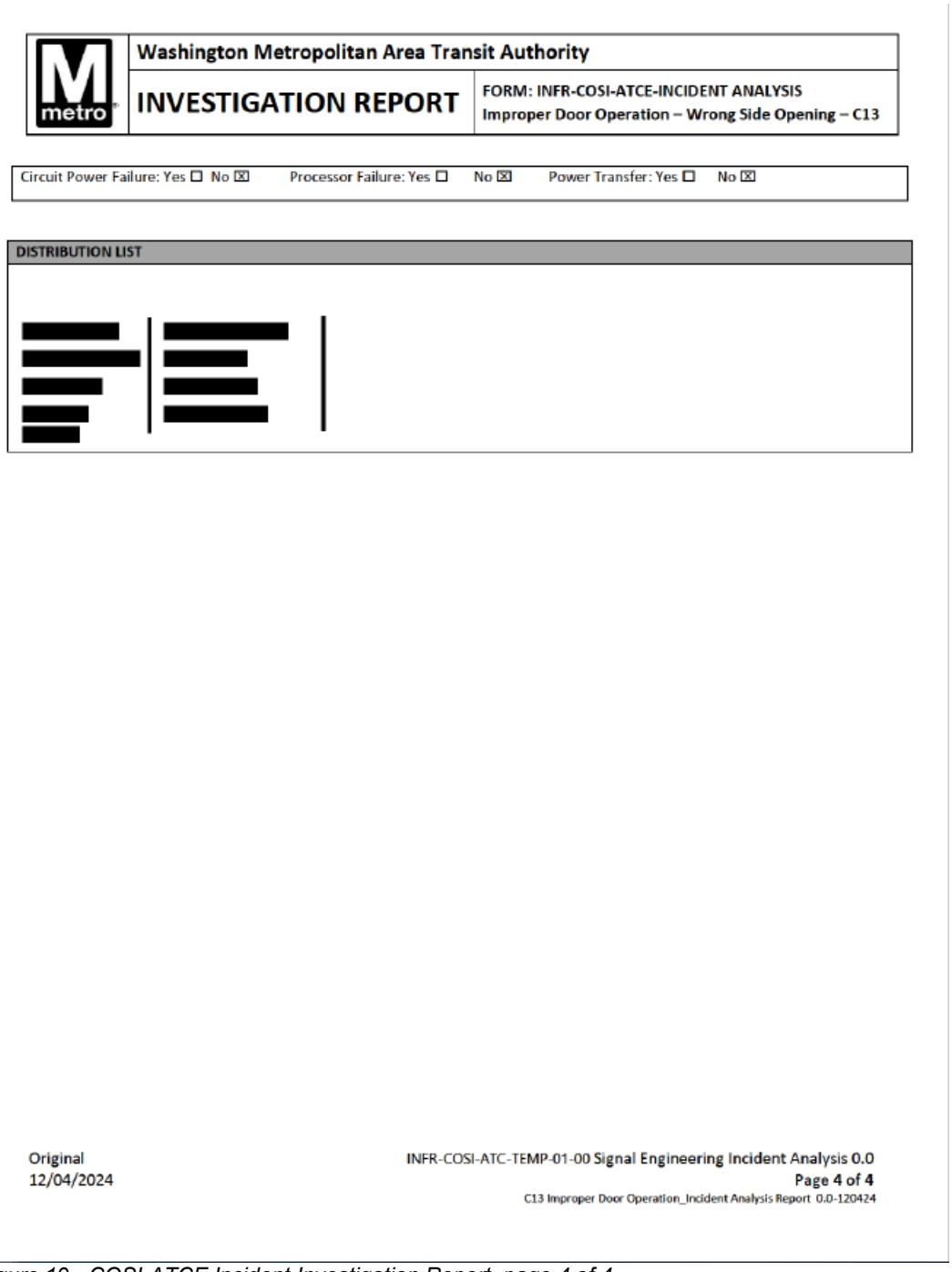
RECORDED EVENT DATA

TIME	LOCATION	STATUS/ CONTROL	AIMS DESCRIPTION	COMMENTS
16:20:24	C13	STATUS	Track Circuit C2-554 Occupied	Train drops C2-554 on approach to C13 platform 2
16:20:31	C13	STATUS	Track circuit C2-562 Occupied	Train 332 occupies C13-2 platform with destination code 31
16.20.55	C13	STATUS	Train 332 is Berthed - Berthed. Door manual operation - 0	Train is berthed at Platform 2, and door operation is not in manual
16.21.00	C13	STATUS	Track 2 Doors close – 3. Train Motion – NOT Motion	No train movement. All doors are closed.
16.21.04	C13	STATUS	Left door open. Door Manual - 0	Left side door opened in auto
16.21.24	C13	STATUS	Right side door open. Door opening mode - Manual	Train 332 right side doors manually opened
16.21.29	C13	STATUS	Track 2 door Opening Mode – Manual	Manual operation detected on TRK-2
16.21.31	C13	STATUS	Track 2 Door Close – Both Open	Both left and right side doors are manually opened at this time
16.21.31	C13	STATUS	Track 2 door Opening Mode – Auto. Right door close	Right side door closed automatically
16:28:53	C13	STATUS	Track 2 Door Close Both Sides	SPOT report and AIMS show both sided doors close on both sides of
16.33.01	C13	STATUS	Train ID 732	SPOT report shows train 332 changes ID to 732 with destination code 99 to C99

Original
12/04/2024

INFR-COSI-ATC-TEMP-01-00 Signal Engineering Incident Analysis 0.0
Page 3 of 4
C13 Improper Door Operation_Incident Analysis Report 0.0-120424

Figure 18 - COSI-ATCE Incident Investigation Report, page 3 of 4.



Washington Metropolitan Area Transit Authority

INVESTIGATION REPORT

FORM: INFR-COSI-ATCE-INCIDENT ANALYSIS
Improper Door Operation – Wrong Side Opening – C13

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

DISTRIBUTION LIST

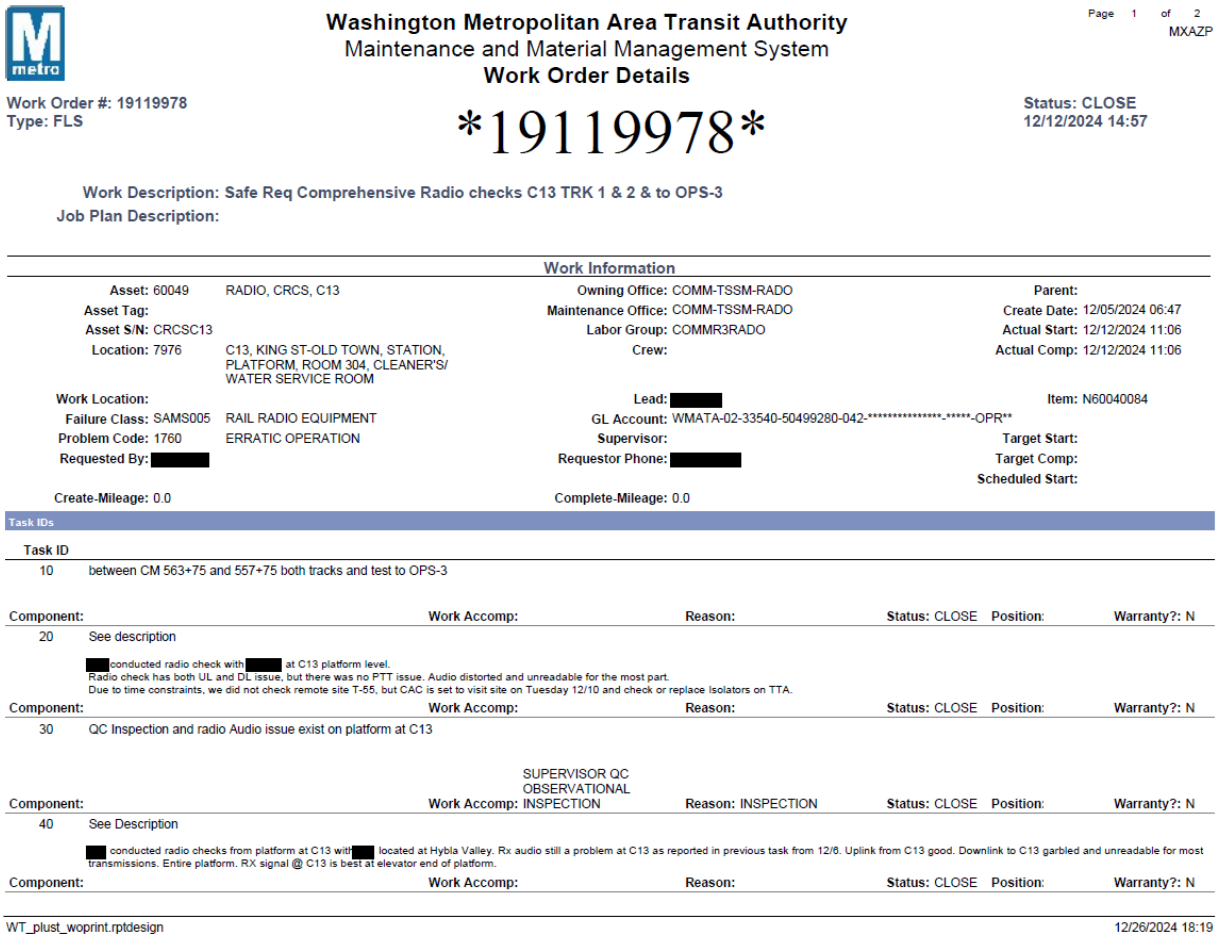
[redacted]

Original
12/04/2024

INFR-COSI-ATC-TEMP-01-00 Signal Engineering Incident Analysis 0.0
Page 4 of 4
C13 Improper Door Operation_Incident Analysis Report 0.0-120424

Figure 19 - COSI-ATCE Incident Investigation Report, page 4 of 4.

Appendix E – Maximo Work Order for a Comprehensive Radio Check



Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Page 1 of 2
MXAZP

Work Order #: 19119978
Type: FLS

19119978

Status: CLOSE
12/12/2024 14:57

Work Description: Safe Req Comprehensive Radio checks C13 TRK 1 & 2 & to OPS-3
Job Plan Description:

Work Information

Asset: 60049	RADIO, CRCS, C13	**Owning Office:** COMM-TSSM-RADO		**Parent:**	
Asset Tag:		**Maintenance Office:** COMM-TSSM-RADO		**Create Date:**	12/05/2024 06:47
Asset S/N: CRCSC13		**Labor Group:** COMMR3RADO		**Actual Start:**	12/12/2024 11:06
Location: 7976	C13, KING ST-OLD TOWN, STATION, PLATFORM, ROOM 304, CLEANER'S/ WATER SERVICE ROOM	**Crew:**		**Actual Comp:**	12/12/2024 11:06
Work Location:		**Lead:** [redacted]		**Item:**	N60040084
Failure Class: SAMS005	RAIL RADIO EQUIPMENT	**GL Account:** WMATA-02-33540-50499280-042-**********-*****-OPR**			
Problem Code: 1760	ERRATIC OPERATION	**Supervisor:**		**Target Start:**	
Requested By: [redacted]		**Requestor Phone:** [redacted]		**Target Comp:**	
				Scheduled Start:	
Create-Mileage: 0.0		**Complete-Mileage:** 0.0			

Task IDs

Task ID						
10	between CM 563+75 and 557+75 both tracks and test to OPS-3					
Component:		**Work Accomp:**	**Reason:**	**Status:** CLOSE	**Position:**	**Warranty?:** N
20	See description [redacted] conducted radio check with [redacted] at C13 platform level. Radio check has both UL and DL issue, but there was no PTT issue. Audio distorted and unreadable for the most part. Due to time constraints, we did not check remote site T-55, but CAC is set to visit site on Tuesday 12/10 and check or replace Isolators on TTA.					
Component:		**Work Accomp:**	**Reason:**	**Status:** CLOSE	**Position:**	**Warranty?:** N
30	QC Inspection and radio Audio issue exist on platform at C13					
Component:		**Work Accomp:** SUPERVISOR QC OBSERVATIONAL INSPECTION	**Reason:** INSPECTION	**Status:** CLOSE	**Position:**	**Warranty?:** N
40	See Description [redacted] conducted radio checks from platform at C13 with [redacted] located at Hybla Valley. Rx audio still a problem at C13 as reported in previous task from 12/6. Uplink from C13 good. Downlink to C13 garbled and unreadable for most transmissions. Entire platform. RX signal @ C13 is best at elevator end of platform.					
Component:		**Work Accomp:**	**Reason:**	**Status:** CLOSE	**Position:**	**Warranty?:** N

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Figure 20 - Maximo Work Order for a Comprehensive Radio Check, page 1 of 2.

Washington Metropolitan Area Transit Authority
Maintenance and Material Management System
Work Order Details

Work Order #: 19119978
Type: FLS

19119978

Status: CLOSE
12/12/2024 14:57

Work Description: Safe Req Comprehensive Radio checks C13 TRK 1 & 2 & to OPS-3
Job Plan Description:

Actual Labor

Task ID	Labor	Start Date	End Date	Start Time	End Time	Approved?	Regular Hours	Premium Hours	Line Cost
10	[redacted]	12/06/2024	12/06/2024	12:00	14:00	Y	02:00	00:00	$99.25
30	[redacted]	12/06/2024	12/06/2024	12:00	14:00	Y	02:00	00:00	$107.27
40	[redacted]	12/10/2024	12/10/2024	12:30	13:30	Y	01:00	00:00	$43.53
						Total Actual Hour/Labor:	05:00	00:00	$250.06

Failure Reporting

Cause		Remedy		Supervisor	Remark Date
2741	PROGRAM FAULTY	1153	BEYOND ECONOMICAL REPAIR		12/12/2024

Remarks: A known RF interference issue that cannot be corrected with current radio network configuration

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Figure 21 - Maximo Work Order for a Comprehensive Radio Check, page 2 of 2.

Appendix F – Why-Tree Analysis