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WMSC Commissioner Brief: W-0196 – Improper Roadway Worker Protection – Medical Center Station – July 16, 2022

Prepared for Washington Metrorail Safety Commission meeting on January 24, 2023

Safety event summary:

A track inspection crew on the Red Line had to unexpectedly rush out of the way of a speeding train on July 16, 2022. The Train Operator operated at excessive speeds past the work crew that was conducting track inspections between Grosvenor-Strathmore and Medical Center stations. The speed was contrary to Metrorail's roadway worker protection (RWP) rules. This event was a near miss of a collision and/or fatalities.

At 9:16 a.m., an Office of Track and Structures Roadway Worker in Charge (RWIC) located on the platform at Grosvenor requested and was granted permission from a Rail Operations Control Center (ROCC) Radio Rail Traffic Controller for their work crew to enter the roadway on Track 1 between Grosvenor-Strathmore and Medical Center stations to continue their Red Line track inspections. An Advance Mobile Flagger (AMF) was in place on the platform at Grosvenor-Strathmore Station to warn trains of the work crew and the Controller made an announcement on Radio Operations Channel 1 notifying Train Operators of the crew and giving them instructions to dim their lights, sound their horns and not exceed 15 mph when they see the crew.

Review of closed-circuit television showed that at 9:41 a.m. Train 260 serviced Grosvenor-Strathmore Station and the train's operator interacted with the AMF before departing the station at 9:42 a.m. At 9:45 a.m., the RWIC notified the ROCC Controller that a train just passed the work crew at an excessive speed and the operator did not sound their horn. Train Operators are required to continuously tap their horns between stations after speaking with an AMF, however the Incident Investigative Team's data analysis report shows that the Train Operator only sounded the train's horn at the time of brake activation after coming upon the work crew. In an interview during the investigation into this event, the RWIC stated they had to jump out of the way of the oncoming speeding train. At the time of the event, the RWIC also noted to the ROCC Controller that the Train Operator activated their brakes when they saw the crew, stopped the train briefly and then continued toward Medical Center Station. The Train Operator did not report this near miss to the ROCC.

The RWIC confirmed with the AMF that the AMF had read the script informing the Train Operator that the crew was working in the roadway. Although the AMF saw the train depart the station at excessive speed, they did not report this over the radio.

Review of event recorder data from this event showed that the Train Operator operated the train at up to 50 mph after leaving Grosvenor-Strathmore Station and after seeing the work crew, initiated the emergency brake 5,603 feet from the platform before coming to a complete stop 6,423 beyond the station's platform limits. The Train Operator did not blow their air horn continuously, in short blasts, as required by Metrorail policy, until they encountered the work crew. Blowing the horn would have alerted the crew in advance that the train was approaching. The Train Operator also did not notify the ROCC of this event as required by WMATA policy.

The ROCC Controller directed the Train Operator to hold at Bethesda Station, where an Office of Rail Transportation Supervisor took over operation of the train and removed the Train Operator from service for post-event toxicology testing. The ROCC Controller notified the ROCC Assistant Director.

During an interview and in a written statement, the Train Operator stated that they were distracted after a customer contacted them on the emergency intercom reporting a possible passenger with a weapon after the operator departed the station and that they then did not follow procedures due to what the operator described in the interview as the emergency on the train that the operator stated the rider on the intercom eventually said did not exist. However, additional Vehicle Monitoring System data of the train reviewed after the interview based on these statements shows there was no intercom activation during the incident, and there was no request made for MTPD personnel at any point by the operator or any other individual.

Probable Cause:

The probable cause of this event was Metrorail's insufficient supervisory oversight, safety assurance and safety promotion, which is required to ensure that safety rules are implemented as required to provide for the survival of Metrorail employees, contractors and first responders.

Corrective Actions:

- Due to this investigation:
  - Completed
    - Division Superintendent reviewed RWP Safety Notice with the Train Operator
    - Office of Rail Transportation (RTRA) management conducted a “Ways of Working Safely” Sprint with an emphasis on AMF/RWP Compliance
    - The Train Operator completed Roadway Worker Protection Requalification
- Other related recommended corrective actions (RCAs):
  - Completed
    - RWP Level 2 Computer-Based Training was updated to include modules focused on the role of the AMF and their procedures
    - RWP Safety Bulletin were distributed to all personnel with an emphasis on AMF Procedures
- Other related corrective action plans (CAPs)
  - Ongoing
    - CAP C-0181 resulted from a finding in the WMSC’s April 2022 Audit of Rail Operations that elements of Metrorail have a culture that accepts noncompliance with written operational rules, instructions, and manuals. Under this CAP Metrorail has committed to develop training content such as safety risk, how to report safety violations, the importance of personal protective equipment and Roadway Worker Protection protocols and other sections of their Agency Safety Plan (PTASP). This CAP has an expected completion date of October 2024.

WMSC staff observations:

The WMSC meets regularly with Metrorail regarding roadway worker protection including raising concerns that Metrorail has not acted upon. The WMSC continues to monitor WMATA as it evaluates and updates its Roadway Worker Protection Program. WMATA should ensure ongoing safety promotion efforts are robust including routine reviews of the RWP Safety Notice with all RWP certified operations personnel and contractors.

The WMSC communicated to Metrorail Safety Department leadership the apparent gaps between the operator's statement and the available data. The operator stated in the interview that they deliberately ignored the safe speed of travel based on an apparent emergency rather than communicating with other personnel to ensure everyone's safety. Metrorail conducted an additional review, and the Office of Rail Transportation determined that low-level discipline was appropriate.

Washington Metro Area Transit Authority
Department of Safety – Office of Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E22424

Date of Event:	July 16, 2022
Type of Event:	Improper RWP – Train Passing Personnel at Excessive Speed
Incident Time:	09:40 Hours
Location:	Between Grosvenor and Medical Center Stations - CM A1 497+00
Time and How received by SAFE:	09:50 Hours – SAFE/IMO
WMSC Notification Time:	10:46 Hours
Responding Safety Officers:	WMATA: N/A WMSC: N/A Other: N/A
Rail Vehicle:	L6005/04x6042/43x6060/61
Injuries:	None
Damage:	None
SMS I/A Incident Number:	20220716#101560

CM A1 497+00 Between Grosvenor Station & Medical Center Station – Improper RWP

July 16, 2022

Table of Contents

Abbreviations and Acronyms

AIMS	Advanced Information Management System
AMF	Advanced Mobile Flagger
ARS	Audio Recording System
CAP	Corrective Action Plan
CCTV	Closed-Circuit Television
CM	Chain Marker
COMR	Office of Radio Communications
MSRPH	Metrorail Safety Rules and Procedures Handbook
MTPD	Metro Transit Police Department
NOAA	National Oceanic and Atmospheric Administration
OM	Operations Manager
OPMS	Operations Management Services
RJSB	Roadway Job Safety Briefing
RWIC	Roadway Worker in Charge
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
ROCC	Rail Operations Control Center
SAFE	Department of Safety and Environmental Management
SMS	Safety Measurement System
SRC	Safety Risk Coordinator
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

On July 16, 2022, at approximately 09:40 hours, a near miss event occurred during a track inspection involving Train ID 260 (L6005/04x6042/43x6060/61T), between Grosvenor Station and Medical Center Station, track 1 near Chain Marker (CM) A1 497+00. Prior to the event, at approximately 09:16 hours, the Office of Track and Structures (TRST) Roadway Worker in Charge (RWIC) and mobile work crew were granted permission from the Rail Operations Control Center (ROCC) Rail Traffic Controller (RTC) to enter the roadway to perform a track inspection between Grosvenor and Medical Center Stations, track 1. At approximately 09:45 hours, the TRST RWIC contacted ROCC and reported a train passing at excessive speed while the Mobile Work Crew was performing a track inspection on track 1 at CM A1 497+00. There were no injuries or damage as a result of this event.

At approximately 09:16 hours, the TRST RWIC contacted the ROCC and reported that they were located at Medical Center Station, track 1 and requested permission to continue their track inspection from Medical Center Station to Grosvenor Station, track 1. The Radio RTC confirmed that an Advanced Mobile Flagger (AMF) was located at the 8-car marker at Grosvenor Station, track 1, ready to flag. The Radio RTC made a blanket announcement on the Ops 1 radio channel that TRST personnel were entering the roadway to perform a track inspection. At approximately 09:17 hours, the Radio RTC granted permission to the RWIC and instructed them to continue their walk from Medical Center Station to Grosvenor Station, track 1.

At approximately 09:41 hours, Train ID 260 entered the platform at Grosvenor Station, track 1. The AMF briefed the Train Operator at the 8-car marker. After receiving instructions from the AMF, Train ID 260 departed Grosvenor Station at approximately 09:42 hours in the direction of Medical Center Station. After departing Grosvenor Station, the Train Operator reached speeds up to 50 mph in the course of traveling to Medical Center Station. The train entered emergency braking in the area where the RWIC reported the excessive speeding event, stopped, and continued on to Medical Center Station.

At approximately 09:45 hours, the RWIC contacted the ROCC and reported the excessive speeding event. The RWIC reported that while conducting their track inspection a train traveling in the direction of Medical Center Station approached their location at an excessive speed, passing the work crew without sounding the horn. The train came to a stop, then continued without notice.

At approximately 09:50 hours, the RTC contacted the Train Operator of Train ID 260 and requested the train to hold at Bethesda Station, track 1. The Train Operator acknowledged the radio call from the RTC and held at Bethesda Station. At approximately 09:53 hours, the ROCC instructed a Rail Supervisor to relieve the Train Operator.

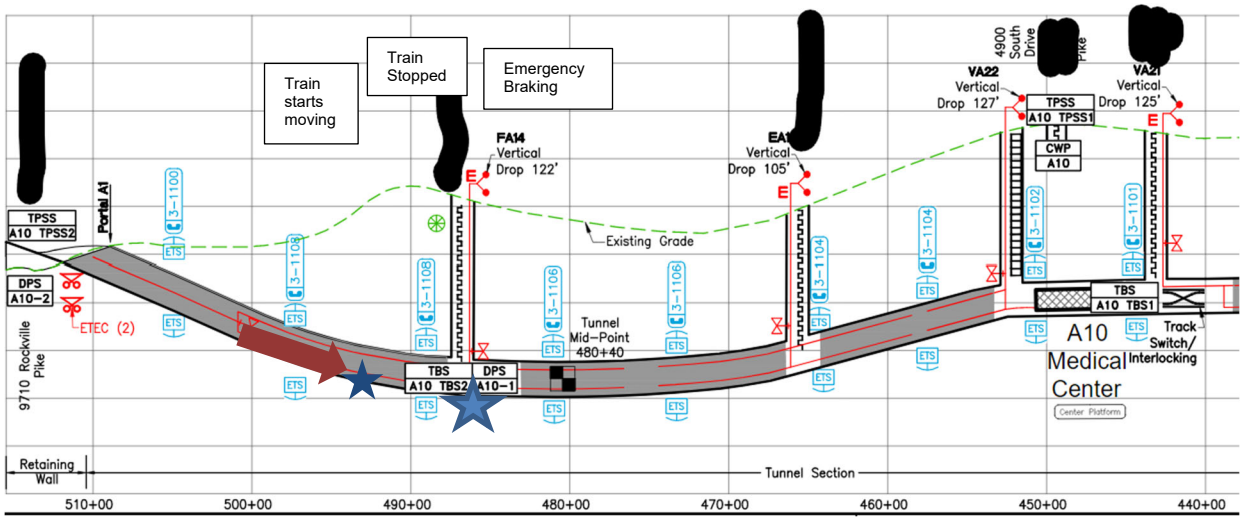
The probable cause of the train passing personnel at Excessive Speed event on July 16, 2022, was failure to perform in accordance with established rules and procedures by the Train Operator. A Contributing Factor to the event was the Train Operator's lack of awareness to the potential outcomes of their actions. The Train Operator's actions were not in accordance with the

procedures established within the MSRPH Section 5 – RWP 5.13.6, *Rail Vehicle Operator Procedures during AMF*.

Incident Site

Grosvenor Station to Medical Center Station, Track 1 at CM 497+00

Field Sketch/Schematics



**Locations are approximate. 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

Upon receiving notification of the Excessive Speed event between Grosvenor Station and Medical Center Station, track 1 on July 16, 2022, SAFE dispatched a cross-functional team to assess the scene and conduct a subsequent investigation. SAFE team members worked with relevant WMATA subject matter experts to review the incident's facts and data.

The investigative methodologies included the following:

- Site Assessment through video and document review

- Formal Interviews – SAFE interviewed four individuals as part of this investigation. Interviews 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 personnel.
    - RWIC
    - Track Inspector
    - Train Operator

- AMF

- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Note: 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:
    - Employee Training Procedures & Records
    - Metro Safety Rules and Procedures handbook (MSRPH)
    - National Oceanic and Atmospheric Administration (NOAA) data
    - Training and Certification Records
    - 30-Day work history
    - Office of Chief Mechanical Officer (CMOR) / Incident Investigation Team (IIT) post-incident analysis data
    - Office of Car Maintenance (CMNT) post-incident inspection data
    - Maximo

- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
    - Audio Recording System (ARS) Playback
    - Advanced Information Management System (AIMS)
    - Closed-Circuit Television (CCTV)

Investigation

On July 16, 2022, at approximately 09:40 hours, a near miss event occurred during a track inspection involving Train ID 260 (L6005/04x6042/43x6060/61T), between Grosvenor Station and Medical Center Station, track 1 near CM A1 497+00. Prior to the event, at approximately 09:16 hours, the TRST RWIC and mobile work crew were granted permission from the ROCC RTC to enter the roadway to perform a track inspection between Grosvenor and Medical Center Stations, track 1. At approximately 09:45 hours, the TRST RWIC contacted ROCC and reported a train passing at excessive speed while the Mobile Work Crew was performing a track inspection between Grosvenor Station and Medical Center Station, track 1 at CM A1 497+00.

The ARS playback indicated that at approximately 09:16 hours, the TRST RWIC contacted the ROCC and reported that they were located at Medical Center Station, track 1 and requested permission to continue their track inspection from Medical Center Station to Grosvenor Station, track 1. The Radio RTC confirmed via radio that an AMF was located at the 8-car marker at Grosvenor Station, track 1, ready to flag. The Radio RTC instructed the RWIC to contact the AMF directly. The RWIC contacted the AMF via radio and requested their location. The AMF responded that they were in place at Grosvenor Station, track 1. The Radio RTC made a blanket announcement on the Ops 1 radio channel that TRST personnel were entering the roadway to perform a track inspection. At approximately 09:17 hours, the Radio RTC granted permission to the RWIC and instructed them to continue their walk from Medical Center Station to Grosvenor Station, track 1.

The CCTV revealed that at approximately 09:41 hours, Train ID 260 entered the platform at Grosvenor Station, track 1. The Train Operator and AMF were observed interacting, with the AMF appearing to read from their scripted card at the 8-car marker. After receiving instructions from the AMF, Train ID 260 departed Grosvenor Station at approximately 09:42 hours in the direction of Medical Center Station.

The CMOR-IIT report revealed that after servicing Grosvenor Station, track 1, the master controller was placed in a power mode P5 and the train began to move in the direction of Medical Center Station at speeds up to 50 MPH. After traveling 5,603 feet, emergency braking was initiated, the road horn was activated at 6,423 feet, the train came to a stop 6,423 feet beyond Grosvenor Station's 8-Car Marker. The data indicates that the master controller was placed in the emergency position. This report revealed that the Train Operator was not operating the train as instructed by the AMF and was not operating in accordance with the procedures established within the MSRPH Section 5 – RWP 5.13.6, *Rail Vehicle Operator Procedures during AMF*.

According to the Train Operator's statement, a passenger activated the emergency intercom and advised that there was a person in another car with their back turned appeared to be waving something that could be a weapon. As the train was departing the platform, they began to gather information that ROCC would need and their attention was focused on the report. However, the CMOR-IIT report revealed that there was no activation of the emergency intercom between Grosvenor and Medical Center Stations. The only speaker activation logged was of the Public Address (PA) system, which was activated by the Train Operator as they departed Grosvenor Station. Additionally, ARS playback did not reveal any communication reported to ROCC from the Train Operator of a person on the train with a weapon between the time that Train ID 206 departed Grosvenor Station and their arrival at Medical Center Station.

At approximately 09:45 hours, the RWIC contacted the ROCC and reported the excessive speeding event. The RWIC reported that while conducting their track inspection a train traveling in the direction of Medical Center Station approached their location at an excessive speed, passing the work crew without sounding the horn. The train came to a stop, then continued without notice.

At approximately 09:50 hours, the RTC contacted the Train Operator of Train ID 260 and requested the train to hold at Bethesda Station, track 1. The Train Operator acknowledged the radio call from the RTC and held at Bethesda Station. At approximately 09:53 hours, the ROCC instructed the Rail Supervisor to relieve the Train Operator.

The Office of Rail Transportation determined that the Train Operator failed to follow RWP Procedures, and was specifically in violation of MSRPH Section 5 – RWP 5.13.6, *Rail Vehicle Operator Procedures during AMF: 1,2,3,4,5,6.* The Train Operator attended Refresher Training and was assessed six (6) points under the Discipline Administration Program (DAP).

Chronological Event Timeline

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

Time	Description
09:16:44 hours	TRST RWIC: Contacted the ROCC Radio RTC and reported they are located at Grosvenor, track 1 ready to continue their track inspection from Grosvenor to Medical Center, track 1. ROCC RTC: Acknowledged and granted authority to enter roadway. TRST RWIC: Responded, AMF how do you copy? AMF: Responded, I am in place at Grosvenor Station, track 1. TRST RWIC: Acknowledged and asked the ROCC Radio RTC, how do you copy? ROCC: Responded, the ROCC copied. We have Ops 1 personnel walking from Grosvenor, track 1. Upon seeing personnel on the roadway, all train operators dim your lights, sound your horn, and do not exceed 15 mph. [Ops 1]
09:41:01 hours	Train ID 260: Arrived Grosvenor Station and interacts with AMF. [CCTV]
09:42:22 hours	Train ID 260: Departed Grosvenor Station. [CCTV]
09:45:12 hours	TRST RWIC: Contacted the ROCC and stated that they just had a train come past at an excessive rate of speed. TRST RWIC stated while conducting their track inspection from Grosvenor Station to Medical Center Station, track 1, a train in the direction of Medical Center Station operated at an excessive speed past them without sounding its horn. TRST RWIC reported that the Train Operator was going so fast that when they noticed the mobile crew, they activated their brakes. Train ID 260 Train Operator stopped their train and then continued. ROCC: Acknowledged. [Ops 1]
09:50:17 hours	ROCC: Train 260 hold at Bethesda, track 1. Train ID 260: Acknowledged. [Ops 1]
10:03:09 hours	ROCC RTC: Contacted Silver Spring Terminal Supervisor to take over operation of Train 260. Silver Spring Terminal Supervisor: Acknowledged. [Phone]
10:07:02 hours	ROCC RTC: Contacted the ROCC Assistant Director via telephone and reported what personnel would be operating Train 260 to Shady Grove. ROCC Assistant Director: Acknowledged and disconnected phone call to speak with the RTC in person. [Phone]

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

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

Event Recorder (ER) Data Graph/Sequence of Events

Based on IIT CMOR analysis of the downloaded VMS and ER, details from the data analysis are as follows:

Adopted from CMOR IIT Report:
"After servicing Grosvenor Station, track #1, the Master Controller was placed in power mode P5 and the train began to move in the direction of Medical Center Station at speeds up to 50 MPH. After traveling 5,603 feet, Emergency Braking was initiated while train was traveling at 50 MPH, the road horn was activated at 6,423 feet, bringing the train to a stop 6,423 feet beyond Grosvenor Station's 8-Car Marker, which transpired during a one minute span .

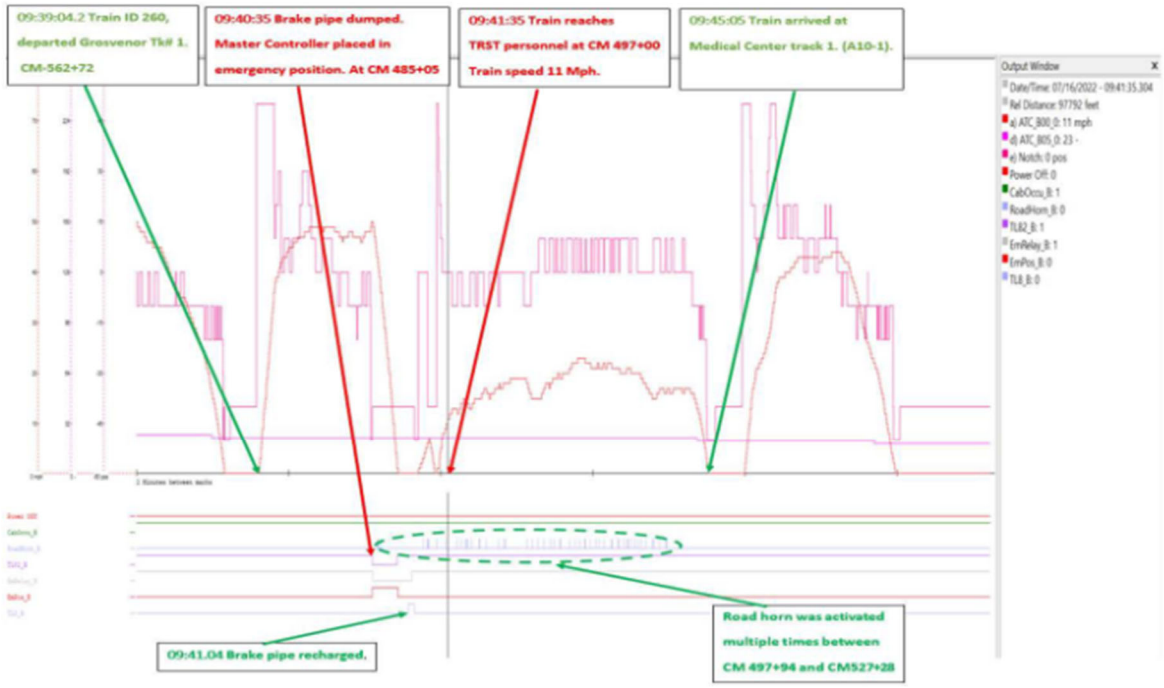
The data indicates that the Master Controller was placed in the Emergency position. The Emergency position is currently monitored on the 6K fleet, and therefore you are able to see the Master Controller's emergency position signal status reflected in the VMS data. In this case, the [braking rate] data is consistent with the master controller being moved emergency position.

Soon after coming to a complete stop, the Emergency recharge switch was activated, and the brake pipe was recharged. After recharging, the train continued to the next station."

Time	Description
09:39:04 hours	Train ID 260 Departed 8-Car Marker at Grosvenor Station at CM 562+72
09:39:46 hours	Train reached speed of 49 mph at CM 541+08
09:40:35 hours	Master Controller placed in Emergency Brake Pipe Application at CM 485+05
09:40:56 hours	Train came to a complete stop at CM 498+49. Horn sounded 3x during emergency stop
09:41:04 hours	Emergency recharge pushbutton activated. Brake pipe recharged
09:41:12 hours	Train began to move in the direction Medical Center Station at 7 mph. Horn activates once at CM 497+94
09:41:24 hours	Train came to a complete stop after traveling 55 feet
09:41:26 hours	Master Controller placed in P5. Train started to move. Horn actives 1x
09:41:35 hours	Train reached TRST personnel at CM 497+00. Horn active
09:41:42 hours	Train speed 13 mph. Horn active 122 feet beyond CM 497+00
09:41:47 hours	Train speed 15 mph. Horn active 219 feet beyond CM 497+00
09:42:03 hours	Train speed 17 mph. Horn active 566 feet beyond CM 497+00
09:42:05 hours	Train speed 17 mph. Horn active 606 feet beyond CM 497+00
09:43:33 hours	Train speed 22 mph. Limit speed 50 mph. Horn active 3028 feet beyond CM 497+00

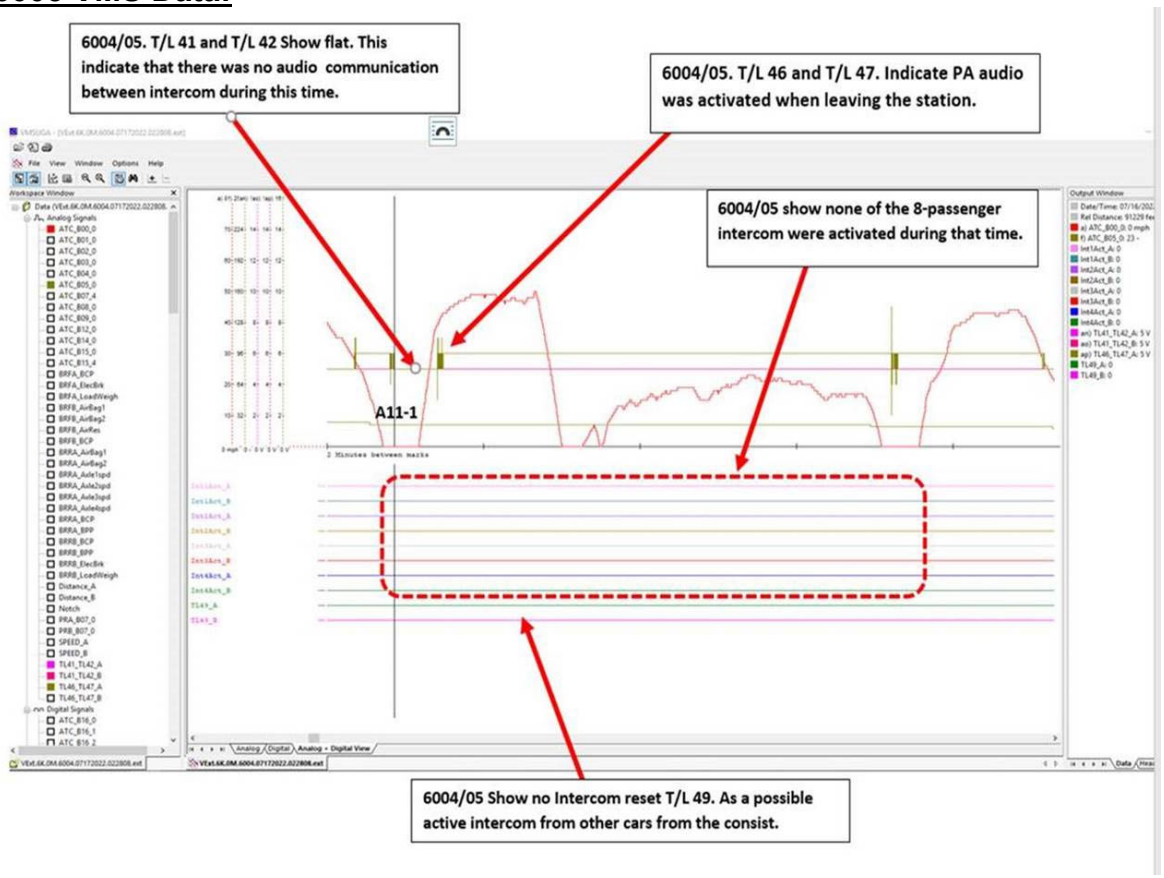
Time	Description
09:43:33 to 09:45:05 hours	Train arrived Medical Center Station track 1.

VMS Data Visualization L6061:



The brake logs were downloaded from the entire consist and there were no faults logged with the friction brake system during the time of incident in question. The train performed as designed.

6004/6005 VMS Data:



Based on the data, there was no activation of emergency intercom from Grosvenor Station to Medical Center Station. There was only a PA audio activated when departing Grosvenor Station. See VMS Graph above.

Interview Findings

Findings detailed below include reported information from interviews and may conflict with other data sources contained in the report. The information will be verified and further summarized in the final investigation report.

- The Train Operator reported initiating an emergency braking application upon noticing they were approaching track workers ahead of their train.
- The Train Operator did not report the train emergency braking.
- The Train Operator asserts that there was an emergency intercom conversation that took place which distracted operations.
- The Advance Mobile Flagger asserts that the Train Operator appeared not to be giving undivided attention to the briefing.

Weather

On July 16, 2022, at the time of the incident, NOAA recorded the temperature as 77° F, and sunny. The event occurred within a tunneled section of the rail system. Weather was not a contributing factor in this incident. (Weather source: NOAA – Location: Washington, DC)

Human Factors

Fatigue

Signs and Symptoms of Fatigue

Advance Mobile Flagger (AMF)

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the incident was reviewed for behaviors suggesting fatigue. No indications of fatigue were evident from the video. The AMF reported feeling fully alert at the time of the incident.

Train Operator

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the incident was reviewed for behaviors suggesting fatigue. No indications of fatigue were evident from the video. The Train Operator reported feeling fully alert at the time of the incident.

Roadway Worker in Charge (RWIC)

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. No video of the involved person was available to ascertain whether evidence of fatigue was present. The RWIC reported feeling fully alert at the time of the incident. The RWIC reported experiencing no symptoms of fatigue in the time leading up to the incident.

Track Inspector

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. No video of the involved person was available to ascertain whether evidence of fatigue was present. The RWIC reported feeling fully alert at the time of the incident. The Track Inspector reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

The incident data was evaluated for fatigue risk factors. Risk factors for fatigue were not present for the RWIC, Track Inspector, Train Operator and AMF. Since fatigue evidence and risk factors were not present, the biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the Train Operator was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Related Rules and Procedures

- MSRPH: General Rule 1.32, *Employees involved in, witnessing, or informed of an accident or incident, to include near misses, on the Metrorail System shall inform their supervisor, Transit Police, ROCC and/or other appropriate authority as soon as possible, and shall file a written report.*
- MSRPH Section 3 – 3.91 Rail vehicles shall not operate as to collide with another vehicle, bumping post, or obstruction.
- MSRPH Section 5 – 5.13.6 Advanced Mobile Flagging – Rail Vehicle Operator Procedures, *The Rail Vehicle Operator will depart the station at half the regulated speed until the operator reaches the next station.*
- MSRPH Section 5 – 5.13.6 Advanced Mobile Flagging – Rail Vehicle Operator Procedures, *The Rail Vehicle Operator must blow the train horn continuously, in short blasts, until they encounter the mobile work crew.*

Findings

- The Train Operator of Train ID 260 was involved in an excessive speed event and failed to report the incident to ROCC.
- VMS data of Train ID 260 revealed no intercom activation of the six cars in the train during the incident time.
- Train Operator was operating the train at a speed higher than one-half of the regulated speed after having contact with the AMF.
- Train Operator did not use the horn in accordance with rail vehicle operator responsibilities.
- Track Inspectors requested and received permission to perform their inspection between Grosvenor Station and Medical Center Stations on track 1.
- AMF performed duties as assigned and advised the Train Operator of ID 260 of personnel on the roadway ahead.
- Prior to TRST personnel entering the roadway at Grosvenor Station, ROCC RTC made announcements over Ops 1, advising Train Operators of personnel on the roadway in the incident area.

Immediate Mitigation to Prevent Recurrence

- The Office of Rail Transportation (RTRA) removed the Train Operator from service for post incident toxicology testing.
- RTRA distributed an excerpt from the MSRPH Section 5 – RWP requiring Rail Supervisors to have documented discussions with Train Operators regarding AMF Procedures.
- RTRA distributed a memorandum to all Rail Station Managers and Train Operators emphasizing RWP Safety by attaching it to the back of their manifests.

Probable Cause Statement

The probable cause of the train passing personnel at Excessive Speed event on July 16, 2022, was failure to perform in accordance with established rules and procedures by the Train Operator. A Contributing Factor to the event was the Train Operator's lack of awareness to the potential outcomes of their actions. The Train Operator's actions were not in accordance with the procedures established within the MSRPH Section 5 – RWP 5.13.6, *Rail Vehicle Operator Procedures during AMF*.

SAFE Recommendations/Corrective Actions

Corrective Action Code	Description	Responsible Party	Due Date
99097_SAFECAPS_RTRA_001	Train Operator reviewed RWP Safety Notice with Division Superintendent.	RTRA	Completed
99097_SAFECAPS_RTRA_002	RTRA Management conducted a "Ways of Working Safely" Sprint with an emphasis on AMF/RWP Compliance.	RTRA	Completed
99097_SAFECAPS_OPMS_001	Train Operator completed Roadway Worker Protection Requalification.	OPMS	Completed

Appendices

Appendix A – Interview Summary

TRST RWIC

The RWIC is a WMATA employee with 6 years of as a Track Walker. The RWIC holds a Roadway Worker Protection (RWP) Level 4 certification that expires July 2023.

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

During the virtual interview, the RWIC stated that they started their workday at 6:55am. They waited for their AMFs and performed a safety briefing before leaving the Division. The RWIC stated that their work assignment for that day was from White Flint to Bethesda. Upon arrival at Medical Center, the RWIC contacted ROCC by radio and asked for permission to proceed with the inspection. “They gave me the OK, read a read back.” They started walking and doing an inspection. There is a fouling point from chain marker A506 to A512. As they were walking towards chain maker A503, they noticed a train approaching at a high rate of speed and they had to jump out of the way. The RWIC contacted the AMF by telephone and asked if they had talked to the train operator and the reply was yes, they did talk to the operator and the train operator left the platform at a high rate of speed. The RWIC stated that they also informed the AMF to call over the radio whenever a train departs a station at a high rate of speed so that the crews can be prepared to move to a position of safety. The AMF is new to the job.

The RWIC stated that they could hear the train coming but no horn blowing as the train passed the crew by 4 cars before the train stopped. The train operator was not given a proceed signal. After the train stopped, there were no announcements made over the public address system and the train just started moving again without warning.

The RWIC stated that once the Rail Operations Control Center was notified, they made a request that all trains slow down coming into the area.

RTRA Train Operator

The Train Operator is a WMATA employee with 17 years of service and 12 years of experience as a Train Operator. The Train Operator holds a Roadway Worker Protection (RWP) Level 2 certification that expires December 2022.

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

During the virtual interview, the Train Operator stated that they spoke with the AMF when they arrived at Grosvenor. During the briefing with the AMF, a passenger activated the emergency intercom and advised that there was a person in another car with their back turned to them and appeared to be waving something that could be a weapon. As the train was departing the platform, the Train Operator was gathering information that Central would need. The Train Operator stated that their mindset was focused on the emergency.

The Train Operator stated that they could see ahead and as they were approaching the portal (tunnel) they could see the track walker ahead, so the train was placed in emergency braking.

During the interview, the Train Operator was asked if at any point during the emergency intercom activation or emergency braking, whether the Rail Operations Control Center was notified. Their response was no.

AMF

The AMF is a Contractor employed with Rail Pro with 4 months of experience. The AMF holds a Roadway Worker Protection (RWP) Level 2 certification that expires July 2023.

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

During the virtual interview, the AMF stated that they were assigned to Grosvenor for flagging, and once they began flagging the Train Operator arrived and they briefed them using the script card. The AMF stated that the Train Operator was not giving their full attention. The Train Operator was looking at me but doing another thing.

The AMF stated that when the Train Operator closed the window and got in the seat, the train "took off." He didn't even blow the horn. I was going to try to call my worker on the phone, but I thought maybe when he hit the curve, they would normally slow down. Usually, they know how far they are within the walks. So, they would just like probably assume that position and slow down but when I heard on the radio that they almost got hit, I knew right away he didn't slow down.

Appendix B – RTRA – RWP Safety Notice

Rail Station & Train Operations

RWP SAFETY

RWP SAFETY

RWP is a means of providing personnel with a uniform method of establishing On-Track protection, while minimizing dangers and hazards associated with working on the Roadway. Personnel are encouraged to raise and report safety concern(s) and Roadway specific issues.

- As the Rail Vehicle Operator approaches an AMF, all Rail Vehicle Operators MUST come to a COMPLETE STOP at the end of the station platform (eight (8) car marker or end gate area). When departing from a terminal station Class 1 Rail Vehicle Operators are required to stop at the end of the platform to receive instructions from the AMF regardless of the number of cars in a consist.
- The Rail Vehicle Operator will be given face-to-face verbal instructions regarding working crews on the tracks. Important: It is the Rail Vehicle Operator's responsibility to ensure they receive all necessary instructions before proceeding.
- The Rail Vehicle Operator will depart the station at half the regulated speed until the operator reaches the next station, staying alert for multiple work crews. • The Rail Vehicle Operator MUST REMAIN VIGILANT and on the lookout for all work crews. • The Rail Vehicle Operator must blow the train horn continuously, in short blasts, until they encounter the mobile work crew. • Upon observing a work crew, the Rail Vehicle Operator MUST reduce speed to 15 mph, change to low beam headlights, and be prepared to stop.
- As the Rail Vehicle Operator approaches the location of the Watchman/Lookout, and receives the approved Hand Signal to proceed, the Operator will sound the Mainline horn, using two (2) short blasts to acknowledge the Hand Signal being given by the Watchman/Lookout, then operate at a speed no greater than 15 mph past the entire work crew.
- If the Rail Vehicle Operator DOES NOT receive the proper approved Hand Signal to proceed from the Watchman/Lookout, the Rail Vehicle Operator MUST IMMEDIATELY STOP one car length away from the Watchman/Lookout and contact ROCC for further instructions.
- Once the rear of the Rail Vehicle has passed the entire work crew (count at least eight chain markers after passing the roadway workers), the Rail Vehicle Operator shall continue at half the regulated speed until they reach the next station.

TIP #1
Ensure you understand the AMF instructions.

TIP #2
Travel at half the regulated speed, continously sounding your horn until you observe personnel on the roadway.

TIP #3
Upon observing personnel on the roadway and after receiving proper hand signal, 2 short horn blasts, and reduce speed to 15 mph until clear of personnel.

TIP #4
Once you are clear of personnel (count at least eight chain markers), travel at half the regulated speed until you reach the next station.

SAFE Hotline • The Safety Hotline is used to report any safety concern(s). Individuals may choose to remain anonymous when reporting their concern(s). • Personnel can report a concern via the WMATA Intranet homepage or by calling the SAFE Hotline 202-249-7233. Close Call Reporting Close Call is a voluntary, confidential and non-punitive reporting system that encourages personnel to report close calls that WMATA would otherwise not know about. • Report a Close Call by calling the Bureau of Transportation Statistics (1-888-568-2377) or via the internet at www.closecall.bts.gov. • A Close Call report must be initiated within 16 hours of the close call event and completed within 24 hours.

January 2022

Appendix C – RTRA Investigation Report

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

INVESTIGATION REPORT	DIVISION GLENMONT	GARAGE N/A	FILE NO.

DATE OF OCCURRENCE	TIME	VEHICLE NO.	RUN #	SHIFT	BLOCK NO.
July 16, 2022	9:45am	L 6066-6042-6060	CM 203		ID 260

LINE	LOCATION	DESTINATION
RED	Between Grosvenor and Medical Center Stations	Silver Spring

TYPE OF CASE:
Violation of MSRPH 1.5, MSRPH Section 5: Rail Vehicle Operator Procedures during AMF: 1,2,3,4,5,6

REPORTED BY:
TRST Uni[redacted]

NAME OF EMPLOYEE INVOLVED:
Train Operator [redacted]

EMPLOYEE NO.
[redacted]

NATURE OF OCCURRENCE:
Failure to Follow RWP Procedures

1. SUMMARY OF INVESTIGATION 2. STATEMENT OF EMPLOYEE 3. RULE(S)/ POLICY VIOLATED.
4. ANALYSIS OF FACTS / EVIDENCE IN SUPPORT OF RULE VIOLATION 5. ASSESSMENT OF DISCIPLINE

1. At approximately 9:45am, Glenmont Management was notified that train ID 260, Operator [redacted] violated RWP procedures while operating his train between Grosvenor and Medical Center Stations on track #1. After receiving the briefing, Operator [redacted] left Grosvenor Station on Track #1 traveling more than half of the regulated speed of 54mph. Operator [redacted] failed to blow his train horn in two (2) short blasts and reduce his speed to 15 mph while passing the mobile work crew. After four (4) cars passed the mobile work crew, Operator [redacted] stopped his train by placing the master controller into the emergency position which caused the brake pipe pressure to dump. Operator [redacted] then blew his horn three (3) times then activated the recharge button resumed normal operating at a speed of 7mph to half the speed regulations until his train arrived at Medical Center Station.

2. Operator [redacted] in your report you stated. "Upon leaving Grosvenor Strathmore. I was punched up on my emergency intercom. It was reported that a passenger in a different car was branching something towards passengers. They reported it could be a weapon, but he has his back turned to them. As I'm gathering information they said disregard. So I shut off intercom. I'm approaching the portal at this time where I noticed workers approximately a thousand feet away. I brought my train to a complete stop, which ended to be right next to them. I reported the emergency to supervisor [redacted]. When supervisor [redacted] took over operation, we was punched up a second time saying the customer was brandishing a knife."

ACTION TAKEN
DAP Level II Violation- Six (6) Points Assessed and Refresher Training.

DATE	ACTION TAKEN BY:	TITLE
August 3, 2022	[redacted]	Superintendent

EMPLOYEE SIGNATURE [redacted]

I certify that the above has been called to my attention, and I understand that my signature does not imply admission of guilt

EMPLOYEE MAY WRITE A STATEMENT IN THIS SPACE

Decline to use my two positive points I earned.

4.21 (8/79) Orig: Office of Bus Service (BUSV) or RAIL Yellow: Employee 068 00
0738 R1
Green: Employee Division File Pink: Union Gold: Marketing/MARK

Document 1 – RTRA Investigation Report, Page 1 of 3

3. Operator [redacted] it was revealed that you violated the following WMATA rules/procedures:

MSRPH 5.13.16 Rail Vehicle Operator Procedures during AMF:

1. As the Rail Vehicle Operator approaches an AMF, all Rail Vehicle Operators **MUST** come to a **COMPLETE STOP** at the end of the station platform (eight (8) car marker or end gate area).
    - When departing from a terminal station Class 1 Rail Vehicle Operators are required to stop at the end of the platform to receive Instructions from the AMF regardless of the number of cars in a consist.
2. The Rail Vehicle Operator will be given face-to-face verbal Instructions regarding working crews onthe tracks.
3. The Rail Vehicle Operator will depart the station at half the regulated speed until the operator reaches the next station, staying alert for multiple work crews.
    - The Rail Vehicle Operator **MUST REMAIN VIGILANT** and on the lookout for all workcrews.
    - The Rail Vehicle Operator must blow the train horn continuously, in short blasts, until they encounter the mobile work crew.
    - Upon observing a work crew, the Rail Vehicle Operator **MUST** reduce speed to 15 mph, change to low beam headlights, and be prepared to stop.
4. As the Rail Vehicle Operator approaches the location of the Watchman/Lookout, and receives the approved Hand Signal to proceed, the Operator will sound the Mainline horn, using two (2) short blasts to acknowledge the Hand Signal being given by the Watchman/Lookout, then operate at a speed no greater than 15 mph past the entire work crew.
5. If the Rail Vehicle Operator **DOES NOT** receive the proper approved Hand Signal to proceed from the Watchman/Lookout, the Rail Vehicle Operator **MUST IMMEDIATELY STOP** one car length away from the Watchman/Lookout and contact ROCC for further Instructions.
6. Once the rear of the Rail Vehicle has passed the entire work crew, the Rail Vehicle Operator shall continue at half the regulated speed until they reach the next station.

4. Operator [redacted] an investigation of this incident included your incident report, data analyzed from your lead car 6005. The Incident Investigation Team (IIT) Engineers analyzed the data retrieved from Train ID 260 Lead Car 6005 and provided this data to SAFE which was then shared with RTRA Management. The data provided revealed the following timeline:

- At 9:39:04.288, Train ID 260, Car 6005 departed Grosvenor Station track#1
- At 9:39:46.232 Train reached maximum speed of 49mph at CM 541-08
- At 09:40:35.088 Brake pipe dumped master controller was placed in emergency position at CM485+05
- At 09:40:56.140 Train came to complete stop at CM 498+49. Road horn was activated during emergency stop 3 times
- At 09:41.04.460 Emergency recharge push button was activated brake pipe recharged
- At 09:41:12.332 Master controller was placed in CST. Train started to move maximum 7mph horn was activated during train move. CM 497+94
- At 09:43:33.140 Train arrived at Medical Center Station track#1.

Document 2 - RTRA Investigation Report, Page 2 of 3

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Investigation Report Continuation Sheet Page 3 of 3

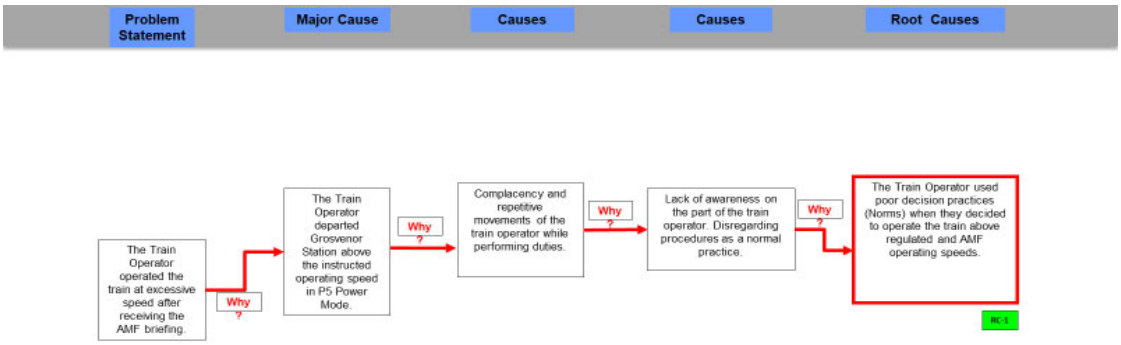
Operator [redacted], after being briefed by the AMF, it has been determined that you did not operate the train half the regulated speed, blowing your train horn continuously, in short blasts, until observing the mobile work crew. Instead, you departed Grosvenor Track #1 (A11-1) in a P5 reaching train speeds of 49Mph with regulated speed of 54Mph. While operating at the speed of 50 Mph, you moved the master controller from a P2 to the emergency position bringing the train to a complete stop at CM 485+05. At this point you initiated the road horn 3 times, recharged the train, sound the horn 1 time before performing a rolling brake test. You then initiated the train horn and moved towards Medical Center Station at speeds ranging from 11 mph to 22 Mph.

Operator [redacted] the safety of our customers and employees is our priority. Your failure to follow RWP procedures is a severe safety concern which could have resulted in an employee injury or fatality. As a Train Operator, it is imperative to follow procedures that were established to protect our employees on the roadway.

5. Operator [redacted] in determining the appropriate discipline for this incident, WMATA reviewed your work record. Your record indicates you have been an employee for WMATA since March 11, 2005 and in the position of a Train Operator as of March 12, 2011. You currently have no RWP safety violations, Operator [redacted] because of the above referenced infraction/violation, you are being assessed six (6) points under the Discipline Administration Program (DAP) and Refresher Training at the Carmen Turner Facility. Your refresher training in reference to the rules and procedures violated during this incident on July 16, 2022 will be forthcoming once the training dates are received. Be advised, you are expected to familiarize yourself with all applicable policies and procedures and see an RTRA Division Manager when uncertainties arise. Adhering to these rules will help to ensure the safety of our employees, customers and our infrastructure. Also note, the discipline for accumulating 24 points under the Discipline Administration Program is discharge from the Washington Metropolitan Area Transit Authority.

Document 3 - RTRA Investigation Report, Page 3 of 3

Appendix D – Root Cause Analysis



5 **Root Cause Analysis** WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY