



**WMSC Commissioner Brief: W-0141 – Improper Roadway Worker Protection – Twinbrook Station – September 9, 2021**

*Prepared for Washington Metrorail Safety Commission meeting on January 25, 2022*

**Safety event summary:**

A Rail Controller granted Foul Time to a track inspection team when a train was in the area near Twinbrook Station that was intended to be protected by Foul Time. The track inspection team saw the train coming, the Roadway Worker In Charge (RWIC) informed the Rail Controller, and the inspection team did not enter the Foul Time area until after Foul Time was properly granted. Foul Time is a type of roadway worker protection (RWP) that is intended to allow workers to traverse an area with no train traffic by preventing any trains from entering the area until the workers report that they have cleared that area and reached a safe location.

The Radio Rail Controller had opened a zoomed in “big picture” window on the Advanced Information Management (AIM) system screen to confirm that they (as opposed to a terminal supervisor who normally sets signals there to dispatch trains) had control of an interlocking near Shady Grove Station. The AIM system feature that keeps a view of a larger section of track with train occupancy visible to a controller using the “big picture” window was disabled, so the Rail Controller could not see whether there was any train movement in the area where the track inspection team had requested Foul Time. The Button Rail Controller working on this desk was communicating with a terminal supervisor as part of their regular duties during the Radio Rail Controller’s communication.

The Radio Rail Controller was removed from service for post-event drug and alcohol testing. Another Rail Controller properly granted Foul Time and the crew continued their track inspection.

Upon arrival at Rockville Station, the Rail Operations Control Center requested the RWIC call on a landline to get information about the event.

When the RWIC then attempted to continue on the final segment of their scheduled inspection to Shady Grove Station, the RWIC could not reach their Advanced Mobile Flagger (AMF) at Shady Grove Station on the radio. Due to the apparent radio communication system issues between Rockville and Shady Grove, that final segment of the scheduled track inspection was not conducted.

**Probable Cause:**

The probable cause of this event was Metrorail’s computer settings that allowed the controller who was granting Foul Time to establish a view that showed only a single interlocking with no visibility of the section of track where Train 121 was located.

**Corrective Actions:**

ROCC management issued a memorandum adding an additional layer of sign-off on Foul Time grants.

Following this and other events, Metrorail conducted a roadway worker protection (RWP) safety standdown.

**WMSC staff observations:**



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Metrorail could consider whether there are opportunities for computer setting adjustments or other opportunities such management verification of screen setups that could improve safety.

**Staff recommendation:** Adopt final report.



Washington Metro Area Transit Authority  
Department of Safety and Environmental  
Management (SAFE)

**FINAL REPORT OF INVESTIGATION A&I E21429**

<b>Date of Event:</b>	09/09/2021
<b>Type of Event:</b>	Improper Roadway Worker Protection
<b>Incident Time:</b>	10:59 hours
<b>Location:</b>	Twinbrook Station, Track 1
<b>Time and How received by SAFE:</b>	11:17 hours IMO desk
<b>WMSC Notification Time:</b>	11:51 hours
<b>Responding Safety Officers:</b>	WMATA SAFE: No WMSC: No Other: N/A
<b>Rail Vehicle:</b>	Train 121 (L7298x7299-7291x7290-7424x7425-7317x7316)
<b>Injuries:</b>	None
<b>Damage:</b>	None
<b>Emergency Responders:</b>	None
<b>SMS I/A Number</b>	20210922#95727

Twinbrook Station – Improper Roadway Worker Protection

September 9, 2021

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## Abbreviations and Acronyms

<b>AIMS</b>	Advanced Information Management System
<b>AMF</b>	Advanced Mobile Flagger
<b>ARS</b>	Audio Recording System
<b>CAP</b>	Corrective Action Plan
<b>CM</b>	Chain Marker
<b>CCTV</b>	Closed-Circuit Television
<b>FT</b>	Foul Time
<b>IMO</b>	Incident Management Official
<b>MSRPH</b>	Metrorail Safety Rules and Procedures Handbook
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>RTC</b>	Rail Traffic Controller
<b>RTRA</b>	Office of Rail Transportation
<b>ROCC</b>	Rail Operations Control Center
<b>RWIC</b>	Roadway Worker in Charge
<b>SAFE</b>	Department of Safety and Environmental Management
<b>SMS</b>	Safety Measurement System
<b>TRST</b>	Office of Track and Structures
<b>WMATA</b>	Washington Metropolitan Area Transit Authority
<b>WMSC</b>	Washington Metrorail Safety Commission

## **Executive Summary**

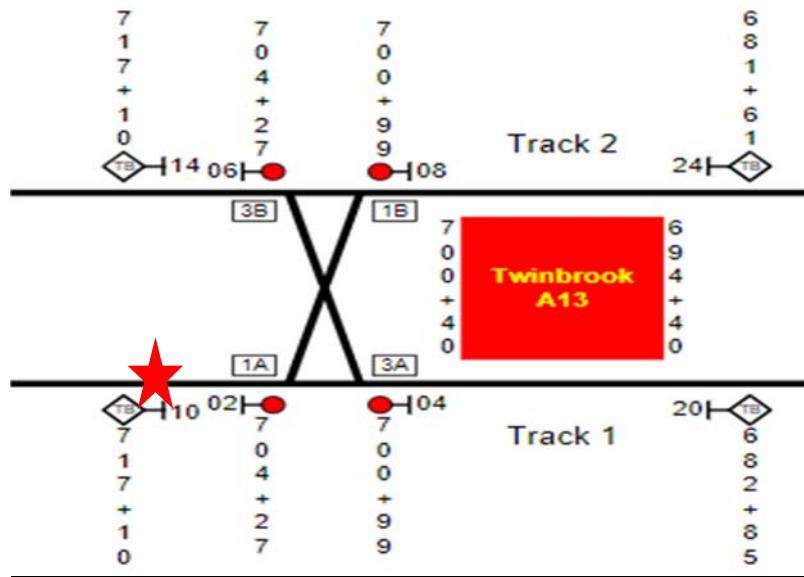
On Thursday, September 09, 2021 at approximately 11:17 hours, the Incident Management Official (IMO) was notified of an improper Roadway Worker Protection (RWP) incident at Twinbrook Station. Leading up to the incident, a Track and Structures (TRST) Roadway Worker in Charge (RWIC) was conducting a track inspection as part of a mobile work crew from White Flint Station to Shady Grove Station via Track 1. The RWIC arrived at Twinbrook Station and requested permission to enter the roadway to continue their walking inspection. The RWIC was granted permission by the Rail Operations Control Center (ROCC) Radio Rail Traffic Controller (RTC) to enter the roadway. When the RWIC arrived at chain marker (CM) 705+00, which is a Hot Spot on the Track Access Guide, they contacted the ROCC to request foul time (FT) from CM A1 705+00 to 711+00. While establishing the FT area, the RTC reportedly zoomed in on the Shady Grove section of their display screen to ensure that ROCC had control of the terminal interlocking, blocking their view of the RWIC's FT area where approaching train ID 121 was located. The RTC proceeded to grant the RWIC the requested FT without verifying the entire area was clear of rail vehicles. The RWIC, who was standing in a place of safety, observed train ID 121 approaching and asked the RTC if they knew a train was approaching their area. The RTC told the RWIC to stand by and stand clear until the train passed. The RTC was removed from service for post-incident testing. There were no reported injuries as a result of this incident.

The probable cause of this event was a human performance deficiency where the Radio RTC failed to confirm that there was no rail vehicle movement within the FT area prior to granting FT protection. A Contributing Factor to the event was a deselected computer setting that would have minimized the "big picture" screen and would have allowed the RTC to see the train approaching the FT area without resetting the view.

## **Incident Site**

Twinbrook Station, Track 1

## Field Sketch/Schematics



\*This image shows the approximate location of the work crew when the train was approaching.

## Purpose and Scope

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

## Investigative Methods

The investigative methodologies included the following:

- Site Assessment through document review
- Formal Interviews – Interviews included persons present at, during, and after the incident, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following two (2) individuals as part of this investigation:
  - RWIC (TRST)
  - Radio RTC
- Documentation Review – Collection of relevant work history information and process documentation contained in WMATA systems of record. These records include:
  - Employees' Training Procedures & Records
  - Employees' Certifications
  - Employees' 30-Day Work History Review
  - Metrorail Safety Rules and Procedures Handbook (MSRPH)
  - National Oceanic and Atmospheric Administration (NOAA)
  - ROCC Incident Report
  - ROCC Checklists and Roadway Access Paperwork
- System Data Recording Review – Collection of information contained in Metro Data Recording Systems. This data includes:

- ARS (Audio Recording System) playback [Radio Ops.1 and Landline Communications- Red-Line 12051]
- Advanced Information Management Systems (AIMS)

## Investigation

On Thursday, September 9, 2021, at approximately 11:17 hours, the IMO was notified of an Improper RWP incident at Twinbrook Station. At the time of the incident, a TRST RWIC was conducting a walking track inspection from White Flint Station to Shady Grove Station via Track 1. The RWIC arrived at Twinbrook Station and requested permission to enter the roadway to continue their walking track inspection. The RWIC was granted permission to enter the roadway. When the RWIC arrived at CM 705+00, they contacted the ROCC RTC to request FT from CM 705+00 - 711+00. The RTC proceeded to grant the RWIC the requested FT. As the RTC granted the FT, they had pulled up the “big picture” of Shady Grove Station to see who had control of the board. The RTC performed this action to confirm that ROCC had control of the board at the Shady Grove Interlocking and to tell the RWIC the signals that were set. *NOTE: Because Shady Grove Station is a terminal station, a Terminal Supervisor usually has control of the board, which allows them to dispatch trains from the station by setting the signals.* The “big picture” display of the station covered the AIMS screen that would have allowed the RTC to see Train ID 121 approaching the RWIC’s area. Immediately after the RTC granted the FT, the RWIC asked the RTC if they knew a train was approaching their area. The RTC told the RWIC to stand by and stand clear until the train passed. The RTC was removed from service for post-incident testing. Another RTC took control and granted the RWIC FT. The RWIC continued their walking track inspection. The RWIC arrived at Rockville Station and asked to communicate directly with their Advanced Mobile Flagger (AMF) stationed at Shady Grove Station. The RWIC experienced radio communication issues trying to contact the AMF. The RTC suspended the remainder of the walking track inspection due to radio issues between Rockville and Shady Grove Stations. There were no reported injuries as a result of this incident.

## Chronological Event Timeline

A review of ARS playback, i.e., phone (Red Line 12051) and radio communications (Ops. 1), revealed the following timeline:

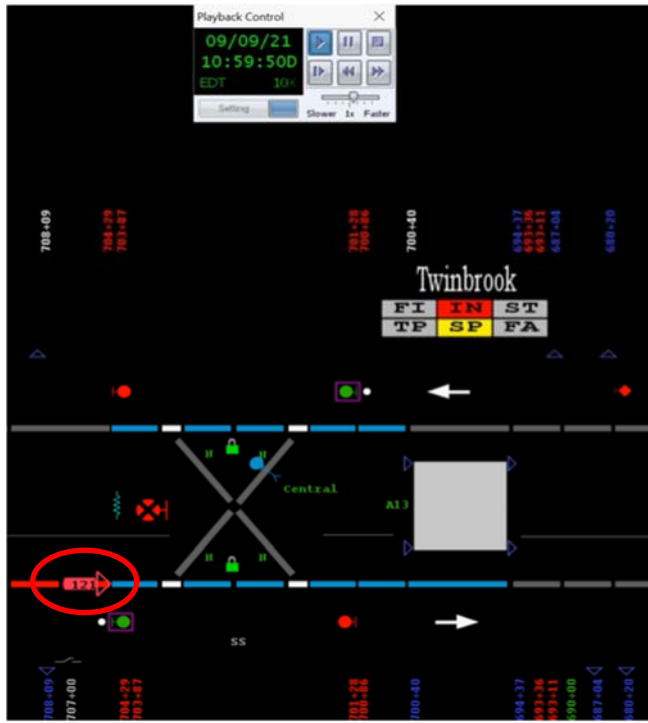
Time	Description
10:52 hours	<u>Radio RTC:</u> Contacts RWIC to request that they go direct with their AMF. <u>RWIC:</u> Asks AMF how do they copy. <u>AMF:</u> Responded that they were in place at Rockville Station, 8 car marker, Track 1, and ready to flag.
10:52 hours	<u>Radio RTC:</u> Provided blanket announcement to train operators that there were track personnel walking from Twinbrook Station to Rockville, Track 1. Informed RWIC that there was one train in approach on Track 1, and to advise when the train was properly berthed. <u>RWIC:</u> Confirmed that they would advise when train was properly berthed.
10:53 hours	<u>RWIC:</u> Informed Radio RTC the train was properly berthed. <u>Radio RTC:</u> Granted RWIC permission to enter the roadway to continue their walking track inspection to Rockville Station.
10:58 hours	<u>RWIC:</u> Requested FT at A1 705+00 – A1 711+00 <u>Radio RTC:</u> Repeated the CMs for the requested FT. <u>RWIC:</u> Affirmed.



Time	Description
	<p><u>Radio RTC</u>: Stated A15- 02 &amp; 06 signals were red.  <u>RWIC</u>: Repeated the radio transmission.  <u>Radio RTC</u>: Granted FT.  <u>RWIC</u>: Asked RTC if there was a train coming.  <u>Radio RTC</u>: Affirmed that there was a train coming and to let them know when the train cleared.  <u>RWIC</u>: Asked Radio RTC if they copy that there was a train coming through the requested FT location.  <u>Radio RTC</u>: Affirmed that there was a train coming and requested the RWIC stand by and stand clear until the train passed.</p>
11:00 hours	<p><u>RWIC</u>: Informed Central that the train cleared their location.  <u>Radio RTC #2</u>: Informed RWIC that A15-02 &amp; 06 signals were red.  <u>RWIC</u>: Repeated radio transmission.  <u>Radio RTC #2</u>: Granted FT to RWIC.</p>
11:04 hours	<p><u>RWIC</u>: Informed Radio RTC #2 that they were relinquishing their FT and going back under AMF protection.  <u>Radio RTC #2</u>: Repeated radio transmission, provided the time FT was relinquished, and stated to let them know when the next FT is needed.</p>
11:43 hours	<p><u>RWIC</u>: Requested FT at A1 788+00 - 795+00.  <u>Radio RTC #2</u>: Repeated CMs for requested FT and asked if a train just passed their location.  <u>RWIC</u>: Confirmed that a train did just pass their location.  <u>Radio RTC #2</u>: Informed the RWIC that A15 02 &amp; 06 signals were red.  <u>RWIC</u>: Repeated radio transmission.  <u>Radio RTC #2</u>: Granted the RWIC FT and informed them to advise when they relinquished FT.</p>
11:46 hours	<p><u>RWIC</u>: Relinquished FT and advised they were going back under AMF protection.</p>
11:47 hours	<p><u>Radio RTC #2</u>: Acknowledged FT was relinquished. Requested RWIC to give a landline when they arrived at the platform of Rockville Station.</p>
11:49 hours	<p><u>RWIC</u>: Called the landline at ROCC as Radio RTC #2 requested and transferred to ROCC Assistant Superintendent. [Phone- Red Line 1]</p>
11:54 hours	<p><u>RWIC</u>: Requested to go direct to their AMF at Shady Grove Station.  <u>Radio RTC#2</u>: Granted them permission to go direct but informed them they weren't sure if they would be able to contact them due to radio issues in that area.  <u>RWIC</u>: Tried to contact AMF at Shady Grove but told Radio RTC #2 they were getting negative response from the AMF.</p>
11:55 hours	<p><u>Radio RTC</u>: Affirmed and informed RWIC they would have to cut their walk short due to radio issues between Rockville and Shady Grove Stations.</p>
11:58 hours	<p><u>RWIC</u>: Contacted Radio RTC #2 on the landline to receive the Work Order (WO) number for the radio issue between Rockville and Shady Grove Stations. WO# 16563605. [Phone-Red Line 1]</p>

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

## Advanced Information Management System (AIMS)



\* This image shows when Train ID 121 stopped to talk to the track crew that was granted FT.

### Interview Findings

#### TRST RWIC

The RWIC reported being fully alert leading up to the incident. The RWIC stated they started their walking track inspection at White Flint Station towards Shady Grove Station. The RWIC stated there were no issues encountered during the walking track inspection until they arrived at Twinbrook Station. Once they arrived at Twinbrook Station, the RWIC requested permission to enter the roadway, then requested FT. The RTC granted the RWIC FT while there was a train approaching the RWIC's location. The RWIC stated that when the RTC granted them the FT, they immediately radioed back to the RTC inquiring if they knew a train was approaching. The RTC told the RWIC to stand by and stand clear until the train passed.

#### ROCC Radio RTC

The RTC reported feeling moderately alert leading up to the incident. The RTC stated they pulled up the "big picture" [zoomed in view] of Shady Grove Station to make sure they had control of the board before granting the RWIC FT. When the RTC pulled up the big picture, the display covered the portion of the screen that would have shown Train ID 121's location. The RTC stated this caused them not to see Train ID 121 in approach to the RWIC's location when they granted the FT. The RTC stated there is a setting on the computer that would have prevented the zoomed in view from covering the FT area, but they did not have the setting enabled at the time of the incident.

## **Findings**

- The RTC granted FT while a train was approaching the RWIC's location.
- The RWIC immediately told the RTC there was a train approaching their location.
- The RTC was unaware a train was approaching the RWIC when they granted FT.
- The "big picture" [zoomed in view] of Shady Grove Station covered the screen that would have shown the approaching train.
- There is a setting on the RTC's computer that would have minimized the "big picture" view but it was not selected when this incident occurred.

## **Weather**

On September 9, 2021, at the time of the incident, NOAA recorded the temperature as 73° F, with clear skies throughout the morning. SAFE has concluded that weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Washington, DC.)

## **Human Factors**

### **Fatigue**

#### **RTC**

##### *Evidence of Fatigue:*

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the involved person was not available to ascertain whether evidence of fatigue was present. The RTC reported feeling moderately alert at the time of the incident and reported symptoms of fatigue including yawning leading up to the incident.

##### *Fatigue Risk:*

Incident data was evaluated for fatigue risk factors. Although the RTC demonstrated signs of fatigue, no significant risk factors were identified. The incident time of day (10:59 hours) did not suggest an increased risk of fatigue-related impairment. The RTC worked a schedule consisting of day and evening shifts in the days leading up to the incident. The RTC was off duty for the two days preceding the incident.

From reported bed and wake times, the RTC slept a total of 7.5 hours in the period leading up to the incident and was awake for 5.9 hours at the time of the incident. The off-duty period immediately preceding the incident was 64 hours long, which provided the opportunity for 7-9 hours of sleep. The RTC reported typical workday sleep durations of 7.5 hours and no issues with sleep.

A biomathematical fatigue modelling application (SAFTE-FAST WebSFC) was used to further evaluate any possible fatigue risk underlying the presence of symptoms in the time leading up to the incident. The analysis was based on the RTC's work schedule, bed and wake times from the day before the incident and reported habitual sleep durations. Estimated performance effectiveness at the time of the incident was 95.1%. No significant fatigue factors were identified for this incident.

## **RWIC**

### *Evidence of Fatigue:*

Conditions at the time of the incident were evaluated to distinguish whether evidence of fatigue was present. Video of the involved person was not 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.

### *Fatigue Risk:*

Incident data was evaluated for fatigue risk factors. No significant risk factors for fatigue were identified. The incident time of day (10:59 hours) did not suggest an increased risk of fatigue-related impairment. The RWIC worked day shifts in the days leading up to the incident. Based on the RWIC's reported bed and wake times the day before the incident, the RWIC slept a total of 7.5 hours in the sleep period preceding the incident and was awake for 5.4 hours at the time of the incident. The RWIC reported a total of 8 hours of sleep in the 24 hours preceding the incident. The off-duty period preceding the incident was 15.9 hours long, which provided opportunity for 7-9 hours of sleep. The RWIC 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 RWIC was not in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/6.

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

### Immediate Mitigation to Prevent Recurrence

- The RTC was removed from service for post-incident testing.
- The ROCC Assistant Director issued a memorandum emphasizing the importance of adhering to FT implementation procedures and adding an additional layer of sign-off from the On-Duty Assistant Operations Manager prior to issuing Foul Time.
- The ROCC developed and distributed Lessons Learned on FT Violations.
- The ROCC held a Safety Stand Down with all personnel based on the incident facts, emphasizing the importance of 100 percent word-for-word repeat back, verifying the locations of all rail vehicles, the status of all signals, and the locations requested by personnel before granting FT to personnel on the roadway.
- The RTC completed refresher training on FT procedures.
- In addition to the ROCC-specific Stand Down, all RWP-qualified personnel were required to attend an RWP Safety Stand Down that included a review of recent Improper RWP Events.

### Probable Cause Statement

The probable cause of this event was a human performance deficiency where the Radio RTC failed to confirm that there was no rail vehicle movement within the FT area prior to granting FT protection. The Radio RTC did not have the computer setting selected that would have minimized the "big picture" screen and allowed them to see the train approaching the FT area.

## SAFE Recommendations/Corrective Actions

<b>Corrective Action Code</b>	<b>Description</b>	<b>Responsible Party</b>	<b>Due Date</b>
95727_SAFECAPS_ROCC_01	Lessons Learned Notice: Foul Time Violations	ROCC	Completed
95727_SAFECAPS_ROCC_02	Foul Time Memorandum and Procedural Change: On-Duty Assistant Operations Manager must be notified of all FT requests prior to a RTC granting FT.	ROCC	Completed
95727_SAFECAPS_ROCC_03	ROCC FT Safety Standdown	ROCC	Completed
95727_SAFECAPS_ROCC_04	RWP Standdown for RWP Qualified Personnel	ROCC	Completed
95727_SAFECAPS_ROCC_05	RTC completed refresher training on FT procedures.	ROCC	Completed

## Appendices

### Appendix A – Interview Summaries

#### **Office of Track and Structures (TRST)**

##### *RWIC*

The RWIC has been a WMATA employee for three (3) years and has worked as a Track Walker B for all three (3) years. The RWIC is RWP Level 4 certified, and their certification expires on October 31, 2021. The RWIC's last certification date was April 8, 2021. The RWIC had no history of sleep issues to report and reported feeling fully alert at the time of the incident. The RWIC stated on September 9, 2021, they clocked in at approximately 07:55 hours and had their morning briefing with their supervisor. During this time, they received their assignment for the day. The RWIC gathered their work crew and headed to White Flint Station. White Flint Station, Track 1, was the beginning of their walking track inspection to Shady Grove Station. The RWIC started their walk and everything was going fine. Once they arrived at Twinbrook Station, they contacted ROCC to request permission to enter the roadway and continue their walking track inspection to Rockville Station. The RWIC was granted permission to enter the roadway and they continued to CM 705+00 where they stood to the side because CM 705+00 - 711+00 was a FT area (Hot Spot). The RWIC contacted the RTC to request FT, and the RTC told them to stand by and stand clear. As the RTC was granting the RWIC FT, the RWIC could hear a train blowing their horn. When the RTC finished their radio transmission, the RWIC asked the RTC if they knew there was a train in the area. The RWIC stated that the original RTC never responded, but a new RTC answered and asked the RWIC to stand by and stand clear of the train approaching. The RWIC did not see any other crews in the interlocking.

#### **Rail Operations Control Center (ROCC)**

##### *RTC*

The RTC has been a WMATA employee for one and a half (1.5) years and has only worked as an RTC. The RTC stated they completed ROCC RTC Training approximately eight (8) months ago. The RTC is RWP Level 4 certified, and their certification expires on May 21, 2022. The RTC mentioned they felt moderately alert and were yawning leading up to the incident. The RTC usually gets 7.5 hours of sleep on workdays. The RTC stated they work with a partner on the console, and there was no one shadowing them at the time of the incident. The RTC stated the RWIC contacted them to request FT, then they pulled up the big picture of Shady Grove Station to make sure they had control of the board in order to grant the FT. The RTC confirmed they had control and proceeded to give the RWIC the signals they needed to protect themselves. When the RTC pulled up the big picture of Shady Grove, the display covered the screen that would have shown the approaching train. The RTC stated they did not have a visual of the approaching train when they granted the FT because the necessary screen was blocked by the big picture display. There is a setting that would have prohibited this from happening. The RTC did not have that setting clicked at the time of the incident.

## Appendix B – ROCC Lessons Learned Notice



# ROCC

## Rail Operations Control Center

Incident Date:  
September 9, 2021

### LESSONS LEARNED

#### Foul Time Violations

##### Incident A:

On Thursday, September 9, 2021, PM62 was en route to Branch Ave, under an Absolute Block from E1-345+00 (West Hyattsville) to Columbia Heights. AIM playback shows that lunar signals were set at E06 x 04 and 52 signals for PM62 moving inbound on track #1 at 0357. At 0359, PWR Unit 1239 requested Foul Time at Ft. Totten, track 1; chain markers E1-265+00 to E1-276+00 to enter the tiebreaker room for switching. The student RTC asked PWR Unit 1239 if he was relinquishing Foul Time. PWR Unit 1239 stated, no, he needed Foul Time to enter the tiebreaker room. The student RTC acknowledged the transmission and proceeded to transmit the status of the signals at Mt. Vernon Square as protection. The student RTC then proceeded to grant Foul Time to PWR Unit 1239. At 0404, PM62 reported seeing personnel roadway (within the Absolute Block) at Ft. Totten, track 1.



##### What Went Wrong:

- The student RTC did not completely understand the RWIC's transmission but failed to ask for clarity.
- The student RTC did not comply with the 100% Repeat Back Rule.
- The student RTC did not locate the chain markers on AIM and verify.
- The student RTC failed to fully protect the Foul Time area, granting Foul Time while PM62 had a block and lunar signals at E06x04 and E06x52
- The OJTI did not properly oversee this event and intervene.

##### Incident B:

On Thursday, September 9, 2021, TRST 6216 was conducting a track inspection between Twinbrook and Rockville, Track 1, and requested Foul Time from A1-705+00 to A1-711+00. The RTC repeated back the request and TRST 6216 confirmed. The RTC began announcing the protected signals: A15-02 and A15-06 signals are red. TRST 6216 correctly repeated the protecting signals. Foul Time was granted by the RTC. TRST 6216 immediately asks the RTC if a train was coming. The RTC responded, "affirm".

##### What Went Wrong:

- The RTC granted Foul Time without verifying clear track in the area. The RTC did not have full awareness of the situation.

### INCIDENT ANALYSIS

##### Incident A:

Extra care and attention must be given, especially when rail vehicles are moving against the normal flow of traffic. PM 62 had an absolute block travelling inbound on track #1 at Fort Totten, however the student RTC was setting up protection at Mt. Vernon Square for the requested Foul Time area. There was a clear lack of understanding of where rail movement was occurring and where Foul Time protection was being requested. OJTIs **MUST** be fully observant of student actions at all times.

##### Incident B:

Being present and utilizing the tools given to you to be successful is imperative. Protecting personnel on the roadway is a vital responsibility of a Rail Traffic Controller. It is our duty to do everything possible to ensure personnel roadway are safe.

Fortunately, no one was harmed during these incidents.

**VERIFY THE LOCATIONS OF ALL RAIL VEHICLES, THE STATUS OF ALL SIGNALS, AND THE LOCATION REQUESTED BY PERSONNEL PRIOR TO GRANTING FOUL TIME.**

**LIVES DEPEND UPON IT**

**Appendix C – Foul Time Implementation Memorandum**

**M E M O R A N D U M**



SUBJECT: Foul Time Implementation

DATE: September 9, 2021

FROM: [REDACTED], Asst. Director ROCC [REDACTED]

TO: Staff

Effective immediately, an on-duty Assistant Operations Manager (AOM) must be notified of all foul time requests prior to an Rail Traffic Controller (RTC) granting foul time.

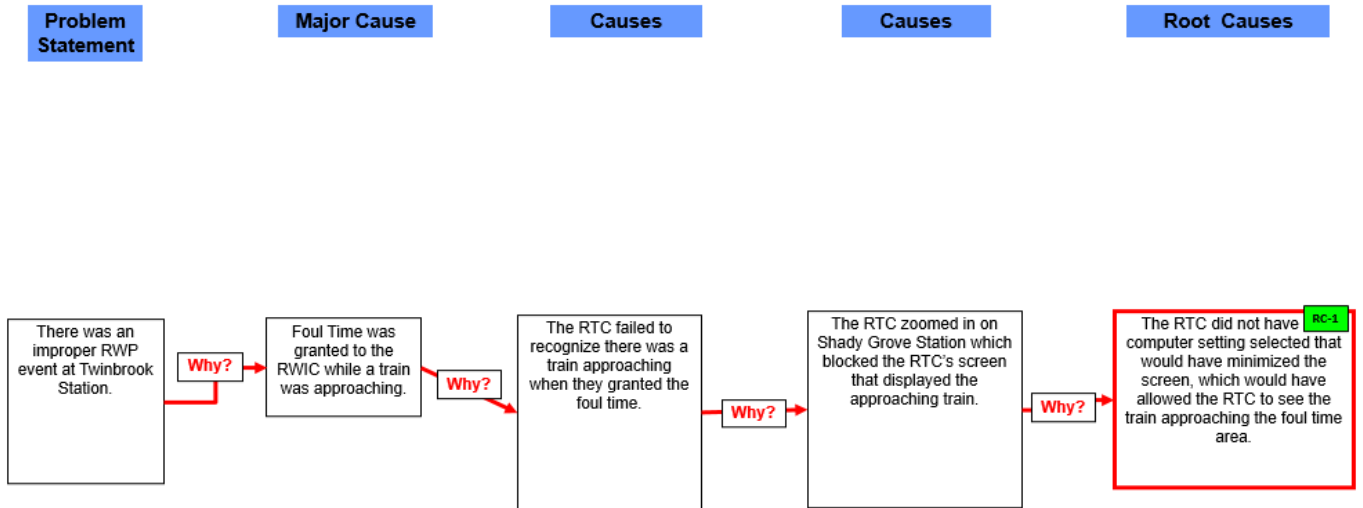
Upon notification, the AOM must observe and verify that the foul time procedure is being adhered to. The observing AOM must confirm that the process has been properly implemented via signature on the foul time checklist.

The on-duty Operations Manager shall ensure that this memorandum is being adhered to at all times.

**Washington  
Metropolitan Area  
Transit Authority**



## Appendix D - Root Cause Analysis



## Root Cause Analysis

