



WMSM Commissioner Brief: W-0167 – Serious Injury – Carmen Turner Facility – January 14, 2022

Prepared for Washington Metrorail Safety Commission meeting on May 24, 2022

Safety event summary:

A Rail Operations Control Center (ROCC) Ops 2 Button Rail Traffic Controller fractured a bone in their hand when it became wedged between the adjustable arm rest of the chair they were sitting on and the console desk as they moved their chair closer to the desk.

The Controller was evaluated by the Fire Liaison Officer, who performed an initial assessment of the injury and suggested the Controller seek medical attention. The Controller took themselves to an urgent care facility where they were diagnosed with a fracture in their right hand.

The chair used by the RTC at the time of the incident was removed from the ROCC. The ROCC Operations Manager determined the chair and work area had no defects.

Probable Cause:

The probable cause of this serious injury was controllers' lack of awareness of the hazard and risk as they attempt to move closer to the console.

Corrective Actions:

Metrorail performed safety briefings with Rail Traffic Controllers discussing chair comfortability and ergonomic hazards in the workplace, and the use of various chair adjustments to prevent injuries.

WMSM staff observations:

Metrorail should consider conducting safety briefings similar to the ones conducted with the Rail Traffic Controller with all office personnel.



Washington Metro Area Transit Authority
Department of Safety and Environmental
Management (SAFE)
FINAL REPORT OF INVESTIGATION A&I E22029

Date of Event:	January 14, 2022
Type of Event:	Serious Injury
Incident Time:	14:46 Hours
Location:	Rail Operations Control Center – CTF
Time and How received by SAFE:	21:29 Hours
WMSC Notification Time:	22:37 Hours
Responding Safety Officers:	WMATA: N/A WMSC: N/A Other: N/A
Rail Vehicle:	None
Injuries:	Small Finger Fracture on Right Hand
Damage:	None
Emergency Responders:	None
SMS I/A Incident Number:	20220114#97884

Rail Operations Control Center (CTF) – Employee Injury

January 14, 2022

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Abbreviations and Acronyms

AOM	Assistant Operations Manager
ARS	Audio Recording System
CAP	Corrective Action Plan
CCTV	Closed-Circuit Television
CTF	Carmen Turner Facility
FLO	Fire Liaison Officer
IMO	Incident Management Officer
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic and Atmospheric Administration
OM	Operations Manager
RISK	Office of Risk Management
ROCC	Rail Operations Control Center
RTC	Rail Traffic Controller
SAFE	Department of Safety and Environmental Management
SMS	Safety Measurement System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Executive Summary

On January 14, 2022, at approximately 14:46 hours, a Rail Traffic Controller (RTC) reported an injury to their right hand to the Assistant Operations Manager (AOM) in the Rail Operations Control Center (ROCC). The RTC stated that their hand became wedged in between an office chair's adjustable armrest and the edge of the console desk as they were changing their position towards the console desk. The RTC declined medical transportation before self-transporting to Express Care in Largo, MD, for treatment.

At approximately 14:44 hours, the RTC notified their console partner that they were stepping away from the console. At approximately 14:46 hours, the RTC reported their injury to the AOM. The AOM notified the Operations Manager (OM) of the reported injury. The Fire Liaison Officer (FLO) located within the ROCC performed a preliminary evaluation of the injury. At approximately 14:55 hours, the RTC self-transported to an urgent care facility for evaluation.

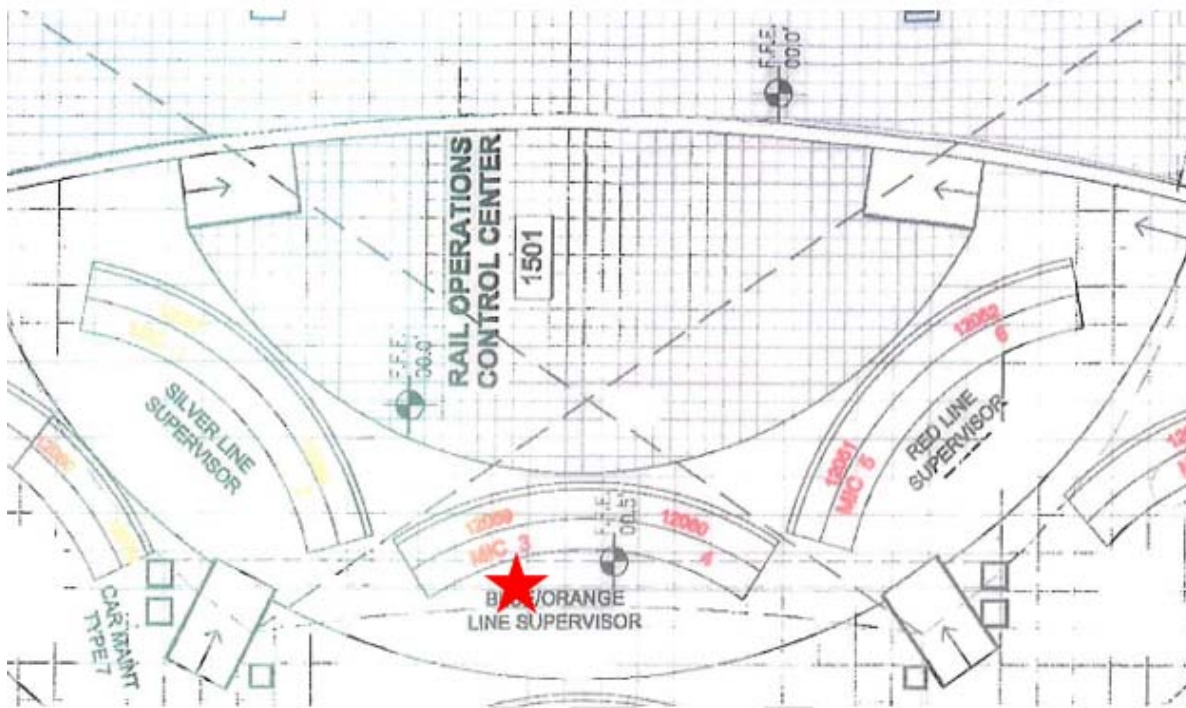
At approximately 21:29 hours, the RTC notified the ROCC OM that they had sustained a fractured right hand and would be held-off of duty. The OM notified the Incident Management Official (IMO) of the upgraded severity of the injury. The OM inspected the chair and work area and did not find any defects or apparent hazards.

The cause of the Serious Injury event at the Rail Operations Control Center – CTF on January 14, 2022, was a lack of awareness by the RTC when they did not adjust the office chair's arm rest before moving the office chair towards the console desk.

Incident Site

Rail Operations Control Center (CTF) – Room D115

Field Sketch/Schematics



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 Serious Injury at the Rail Operations Control Center on January 14, 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:

- Physical Site Assessment
- Formal Interviews – SAFE interviewed one individual as part of this investigation, including the
 - Rail Traffic Controller
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information.
 - ROCC Operations Manager

- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:
 - Employee Training Procedures & Records
 - Metro Safety Rules and Procedures handbook (MSRPH)
 - National Oceanic and Atmospheric Administration (NOAA) data
 - 30-Day work history
 - Maximo
- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
 - Audio Recording System (ARS) playback (Ambient)
 - Closed-Circuit Television (CCTV)

Investigation

On January 14, 2022, at approximately 14:46 hours, a Rail Traffic Controller (RTC) reported an injury to their right hand to the Assistant Operations Manager (AOM) in the Rail Operations Control Center (ROCC). The RTC stated that at approximately 14:41 hours their hand became wedged in between an office chair's adjustable armrest and the edge of the console desk as they were changing their position towards the console desk. The RTC declined medical transportation before self-transporting to Express Care in Largo, MD, for treatment.

At approximately 13:45 hours, the RTC reported for duty and is observed via Closed Captioned Television (CCTV) attending a team meeting until approximately 13:52 hours. After the team meeting, the RTC reported to the Ops #2 (Orange/Blue Line) console desk to begin their work duties. At approximately 14:44 hours, the RTC notified their console partner that they were stepping away from the console. The RTC left the control center to make a telephone call and returned to the console afterward.

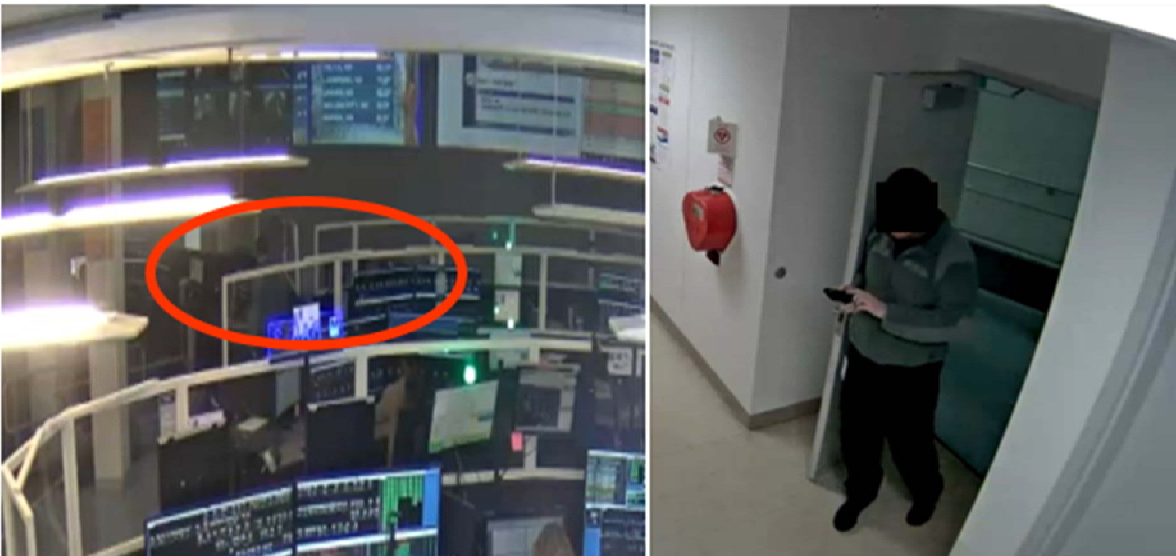


Image 1 – RTC leaving the console desk and making a telephone call.

On the way back to the Ops #2 (Orange/Blue Line) console desk, the RTC reported to their colleague that they had injured their right hand and was advised to report the injury to the AOM. At approximately 14:46 hours, the RTC reported their injury to the AOM. The AOM notified the Operations Manager (OM) of the reported injury, the OM enlisted the assistance of the Fire Liaison Officer (FLO) located within the ROCC. After the FLO conducted a preliminary evaluation of the injury, they recommended that the RTC seek medical attention. At approximately 14:55 hours, the RTC self-transported to an Express Care Urgent Care facility for medical attention.

At approximately 15:39 hours, the colleague that advised the injured RTC to report their injury to the AOM, contacted the Rail Operations Information Center (ROIC) and reported the right-hand injury. The OM inspected the chair and work area and did not find any defects or obvious hazards.



Image 2 - The Injured right hand of the RTC and the console desk and office chair depicting where the injury occurred.

At approximately 16:02 hours, the OM notified the Office of Risk Management (RISK) of the event and was referred to file a Worker's Compensation case. At approximately 16:09 hours, the OM notified the RTC to contact Worker's Compensation.

At approximately 21:19 hours, the RTC notified the OM that they had received a diagnosis of a fracture to the small finger on the right hand. The OM notified the Incident Management Official (IMO) of the upgraded severity of the injury.

On January 15, 2022, at approximately 11:24 hours, the RTC contacted the OM and reported that they were instructed to hold off from returning to duty from the Occupational Health and Welfare Office.

On February 23, 2022, RISK (Worker's Compensation) reported acceptance of the RTC's employee injury claim.

Chronological Event Timeline

Time	Description
14:44:35 hours	<u>Button RTC</u> : I'll be right back. <u>Radio RTC</u> : Alright. [Ambient]
14:52:00 hours	<u>Replacement Button RTC</u> : I think he broke his hand. <u>Radio RTC</u> : Who? <u>Replacement Button RTC</u> : [The Button RTC]. <u>Radio RTC</u> : When? <u>Replacement Button RTC</u> : They got their hand wedged between the desk and the arm rest. [Ambient]
14:59:27 hours	<u>Replacement Button RTC</u> : Your stuff is right here. <u>Button RTC</u> : Okay, I'll probably come back. I don't think its broken, but we'll see. <u>Replacement Button RTC</u> : That looks fractured. <u>Button RTC</u> : How does it work? Do I use my sick time for work? <u>Replacement Button RTC</u> : No. It's going to be comp. <u>Button RTC</u> : I may be out for 3 weeks. <u>Replacement Button RTC</u> : No. You may use some sick time. Go ahead and get checked out. <u>Button RTC</u> : See you later. <u>Radio RTC</u> : Alright. <u>Button RTC</u> : Make sure you get that checked. <u>Radio RTC</u> : No, I don't have those. <u>Replacement Button RTC</u> : Next time you do it, just show me so that I can do it. <u>Radio RTC</u> : Oh my gosh. <u>Button RTC</u> : I can't because you gotta, you know. [Ambient]

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

Interview Findings

As part of the investigation launched into the Serious Injury event, SAFE conducted one interview via Microsoft Teams, including the Investigations Team and the WMSC. The interview was conducted two days after the event and identified the following key findings associated with this event. Findings detailed below include reported information from the interview and may conflict with other data sources contained in the report.

The RTC stated that they were out sick two days before the incident and felt good to return for duty. Currently, their hand is in a cast and feeling better. They were working as the Button Controller on Rail Ops 2 and the injury occurred at approximately 14:41 hours. They reported what happened after they noticed a physical change to their hand. They had just returned to the desk, from being in the hallway, sat down in the chair and used their feet to roll their legs under the desk. The hand was on the armrest; the arm was crushed between armrest top and the bottom edge of the desk. After the incident, they noticed that their pinky finger became hard to move and their hand started swelling. They informed the AOM and OM, who referred them to the Fire Liaison. They left the Control Center for treatment at an Urgent Care Center.

An Informal Interview was conducted with the ROCC Operations Manager, the following statement was provided.

The OM reported that the RTC sustained an injury to their right hand at the ROCC CTF OPS-2 Console. The RTC reported the injury to their immediate supervisor at 14:46 hours and declined medical treatment on scene. The RTC self-transported to an Urgent Care in Upper Marlboro, MD, at 14:54 hours. The RTC was provided the telephone number to Worker's Compensation to report their injury. The RTC reported a fracture to their right hand at 21:29 hours. The OM evaluated the office chair that the RTC was sitting in and determined that the office chair had no mechanical defects. The OM evaluated the console table that the RTC was sitting at and did not observe any defects or obvious hazards.

Weather

On January 14, 2022, at the time of the incident, NOAA recorded the temperature as 47° F, with Scattered Clouds. The injury occurred indoors, in a climate-controlled environment. SAFE has concluded that weather was not a contributing factor in this incident. (Weather source: NOAA – Location: Landover, MD)

Human Factors

Fatigue

Signs and Symptoms of Fatigue

Evidence of Fatigue – Rail Traffic Controller

SAFE evaluated conditions at the time of the incident 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 Rail Traffic Controller reported feeling fully alert at the time of the incident. The Rail Traffic Controller reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

SAFE evaluated incident data for fatigue risk factors. There were no risk factors for fatigue identified. The incident time of day (14:50 hours) does not suggest an increased risk of fatigue-related impairment. The employee worked mid-day shifts (approximately 14:00 – 22:00) in the days leading up to the incident. Based on the employee's reported bed and wake times, the employee slept a total of 8 hours in the sleep period preceding the incident and was awake for 5.6 hours at the time of the incident. The off-duty period preceding the incident was 111.3 hours long (4 days), 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

The Rail Traffic Controller was not referred for Post-Incident Toxicology Testing. The Rail Traffic Controller reported directly to an Urgent Care Facility after the injury.

Findings

- The RTC was absent on sick leave two days before returning to duty on the date of injury.
- The RTC walked away from the console desk a few minutes before the injury occurred.
- There were no slip, trip or fall hazards in the area where the injury occurred.
- The OM evaluated the office chair involved in the injury of the RTC and found no defects.
- The RTC was held off-duty due to the injury.

Immediate Mitigation to Prevent Recurrence

The office chair involved in the injury of the RTC was removed from the console desk and evaluated for defects or damage.

Probable Cause Statement

The cause of the Serious Injury event at the Rail Operations Control Center – CTF on January 14, 2022, was a lack of awareness by the RTC when they did not adjust the office chair's arm rest before moving the office chair towards the console desk.

SAFE Recommendations/Corrective Actions

Corrective Action Code	Description	Responsible Party	Due Date
97884_SAFE CAPS_ROC C_001	Perform Safety Briefings with Rail Traffic Controllers discussing chair comfortability and ergonomic hazards in the workplace (e.g. awkward postures, repetitive motions), and the use of various chair adjustments to prevent injury.	ROCC	Completed

Appendices

Appendix A – Interview Summary

The Rail Traffic Controller is a WMATA employee with three years of service and experience as a Rail Traffic Controller. The Rail Traffic Controller holds a Roadway Worker Protection (RWP) Level 4 certification that expires in December 2022.

The RTC stated that they were out sick two days prior to the incident and felt good enough to return to duty. The RTC stated that they are currently feeling fine, and their hand is in a cast and feeling a lot better. The RTC stated that they were working as the Button Controller on Rail Ops 2 and ROCC was functioning normal and they had a good hand off from the staff prior to beginning their work duties. The RTC stated that the injury occurred at approximately 14:41 hours and they reported the injury after they noticed a physical change of their hand. The RTC stated that prior to the injury they had come back to the desk from the hallway near the locker room after checking for a folder that they usually sit in that area. Then they noticed that they already had the folder and came back to the Control Center immediately. They sat down in the chair and used their feet to roll their legs under the desk turning to the left towards the computer as their hand was on the arm rest, the arm rest was set at a height that their hand was crushed between the top of the arm rest and the bottom edge of the desk. The RTC stated that after the incident they thought that their hand would be a bruised and continued to go about their day. Then they noticed that their pinky finger became hard to move and their hand started swelling. The RTC stated that they showed their hand to a co-worker standing nearby and they suggested that they get their hand looked at. The RTC stated that they proceeded to inform the AOM and OM, who took them to the FLO for evaluation. The RTC stated that the FLO confirmed that they could see the swelling and that they should have their hand evaluated at a medical facility. The RTC stated that they departed from the Control Center for treatment from an Urgent Care Center. The RTC stated that there were no lighting issues, they could see everywhere they were going, and it wasn't dark. The RTC stated that no one witnessed the incident; their console partner was facing away from them and would have not seen the incident occur. The RTC stated that there were no issues with the chair and they usually adjust the arm rest when they sit down since their knuckles touch the edge of the desk and they just forgot to adjust the arm rest when they sat down prior to the incident. The RTC stated that they did not make any vocal yelps in pain, they just held their hand afterwards in comfort. The RTC stated that their hand was not injured prior to reporting for duty on the day of the incident and had not had any injury to their hand in the past. The RTC stated that they are currently working a new shift from 2:00pm-10:00pm and they like that they are able to get more rest because of the shift.

Appendix B – Witness Statement



Witness or Employee Statement Form

Washington Metropolitan Area Transit Authority

TO BE COMPLETED AND

DISTRIBUTED WITHIN 24 HOURS

Involved Person or Witness (Use this Block for Non-WMATA Involved Person or Witness)			
Name	Phone Number	E-Mail	
Address			
Incident Information			
Date	Incident Time	Date/Time Reported	Location
Incident ID# (from OCC) – Completed by Supervisor			SMS Incidents/Accidents Report# Completed by Supervisor
What happened prior to the incident/accident? <i>I didn't witness anything prior to the incident</i>			
Describe the incident/accident <i>[redacted] informed me of his incident. I witness his right hand was swollen and that he needs to in form management of his incident.</i>			
What happened after the incident/accident? <i>[redacted] talk with management</i>			

Please indicate the area of the injury by placing an X on the corresponding body parts below. To specify which side of the body is involved, please use "L" for left and "R" for right.



FRONT



BACK

Incident Date: 01/14/2022 Time: 14:41 hours
Final Report – Employee Injury
E22029

Drafted By: SAFE 707 – 03/11/2022
Reviewed By: SAFE 70 – 03/14/2022
Approved By: SAFE 70 – 03/14/2022

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Appendix C – ROCC Fire Liaison Statement

From: [REDACTED]@wmata.com>
Sent: Thursday, January 27, 2022 6:46:53 PM
To: [REDACTED]@dc.gov>; [REDACTED]@wmata.com>; [REDACTED] (FEMS)
Subject: [REDACTED] written statement

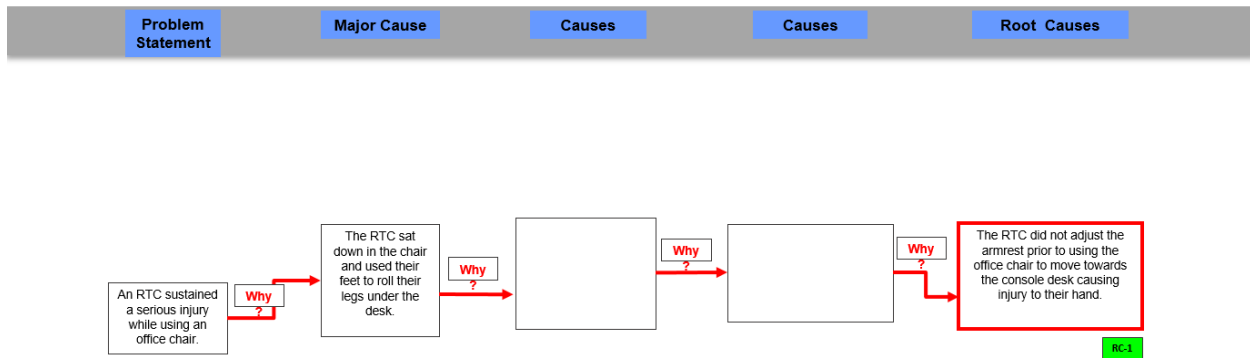
Good Evening,

I was working as ROCC FLO on the day [REDACTED] was injured. I was approached by the Rail One Operation Manager-[REDACTED] at around 14:00 to evaluate [REDACTED] injured hand. From my initial assessment, I noticed a slight discoloration and a minor swelling at the time to his right hand. I compared his right hand with his left hand and I could notice the difference. I asked could he move it, he tried, and it was difficult for him to do so. I recommended that he seek Medical attention, due to the limitation of what we could provide him. I ask would he like for me to call him an ambulance, he declined and he stated that he believed that he could drive himself. I recommended that he go get it checked immediately, either at the emergency or urgent care. That was all my involvement in this incident.

Thanks,

Lieutenant [REDACTED]
[REDACTED] Fire and Rescue
Cell: [REDACTED]

Appendix D - Root Cause Analysis



5 Root Cause Analysis

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

