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WMSC Commissioner Brief: W-0112 – Serious Injury – Clarendon Station – May 8, 2021

Prepared for Washington Metrorail Safety Commission meeting on September 21, 2021

Safety event summary:

A Metrorail customer fell from a moving train between Clarendon and Court House stations after slipping while walking between two railcars via the doors at the end of each car. The customer stated that they attempted to hold on, but eventually fell onto the tracks between stations.

Forward-facing video from a following train shows something on the roadway near the third rail just before Clarendon Station, which, based on the totality of the evidence, was most likely the injured person. It is not clear whether that train made contact with the injured person. Approximately an hour after the customer had fallen, the customer walked through the tunnel to the Clarendon Station platform. The person waited on the platform, then boarded another train toward Vienna Station. They then took a bus to Tysons Corner Station, where they entered the station not wearing shoes, holding their right arm, and generally appearing in disarray. They later contacted a family member approximately eight hours later to get picked up by car from the general vicinity of the Tysons Corner Station.

Metrorail learned of this serious injury from a phone call made by that family member to a Rail Operations Control Center (ROCC) Assistant Superintendent at 8:55 a.m. on May 9, 2021, approximately 11 hours after the event occurred.

The investigation identified the location where the person had fallen, and found a significant amount of blood in that area of the tunnel. Additional blood traces were found in the platform area where the injured person had been.

Probable Cause:

The probable cause of this event was a customer moving from one car to another while the train was in motion.

Corrective Actions:

Metrorail did not develop any corrective actions specific to this event.

WMSC staff observations:

This event demonstrates the importance of vigilance and situational awareness to include awareness of injured individuals who may need assistance and other hazards. This can be achieved both by those physically in the rail system and through consistent monitoring of other data sources such as CCTV.

Metrorail has safety warning signage on end-of-railcar doors stating that the doors are for emergency use only. This event occurred on a 7000 Series train, a series that has signage just below the car number and window on these end-of-railcar doors that includes a stop sign with the word stop, “DO NOT OPEN EMERGENCY USE ONLY”.

Staff recommendation: Adopt final report.

Washington Metro Area Transit Authority

Department of Safety and Environmental

Management (SAFE)

FINAL REPORT OF INVESTIGATION A&I E21194

Date of Event:	05/08/2021
Type of Event:	Serious Injury
Incident Time:	22:22 hours
Location:	Clarendon Station
Time and How received by SAFE:	05/09/2021, at 11:39 hours. SAFE On-Call Phone
WMSC Notification Time:	05/14/2021, at 12:27 hours WMATA made notification upon receipt of police report verifying that an incident occurred.
Responding Safety Officers:	WMATA: No WMSC: No Other: No
Rail Vehicle:	Train ID 602 L7130-**31**x7087-86x7248-49x7141-40T)
Injuries:	Right arm and lower extremities.
Damage:	None
Emergency Responders:	MTPD

Clarendon Station – Serious Injury

May 8, 2021

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Abbreviations and Acronyms

ARS	Audio Recording System
CSS	Crime Scene Search
CCTV	Closed-Circuit Television
I/A	Incidents/Accidents
MTPD	Metro Transit Police Department
NOAA	National Oceanic and Atmospheric Administration
NVR	Network Video Recording
OPMS	Operations Management Services
ROCC	Rail Operations Control Center
RTRA	Office of Rail Transportation
SAFE	Department of Safety and Environmental Management
SMS	Safety Measurement System
SRC	Safety Risk Coordinator
WMATA	Washington Metropolitan Area Transit Authority

Executive Summary

At approximately 08:55 hours, on May 9, 2021, the Rail Operations Control Center (ROCC) Assistant Superintendent received a report from a Washington Metropolitan Area Transit Authority (WMATA) employee that their son had been struck by an unknown train at an unknown station. Based on the information provided to MTPD by the person's family member, the injured person contacted them on May 9, 2021, at approximately 07:18 hours from a nearby Gas Station and stated that they had been struck by a train. The family member picked up the injured person from the Tysons Corner Station on May 9, 2021, at approximately 08:05 hours, transported them to Southern Maryland Hospital, and they were eventually medevacked to MedStar Washington Hospital Center.

Based on Metro Transit Police Department (MTPD) review of the Station's Closed-Circuit Television (CCTV) and Railcar Network Video Recording (NVR) system; the police investigation revealed that the person accessed the platform at Clarendon Station via Track 2 from roadway, from the direction of the Court House Station on Saturday, May 8, 2021, at approximately 22:22 hours. However, there was no visual indication that the person was struck by a train. An investigation of the area where the person had traversed revealed signs of body fluids. A family member transported the person to Southern Maryland Hospital with unknown injuries.

An MTPD Lieutenant responded to MedStar Washington Hospital Center to interview the injured person. The injured person stated that they had changed trains at Metro Center Station, were walking between cars, and fell but were unsure of the location. They attempted to hold on but eventually fell onto the tracks somewhere in the tunnel between stations. They climbed onto an unknown station platform and boarded another train.

A review of the NVR of all the interior cameras of Train ID 602 Cars 7130-**31**x7087-86x7248-49x7141-40 did not reveal any relevant information; the forward-facing camera of the Train ID 605 (**L7220**-21x7203-02x7222-23x7033-32T) consist arriving at the platform before the injured person entered the planform showed an unidentified item on the roadway, which may have been the injured person, laying near the third rail on Track 2 just before the Clarendon Station.

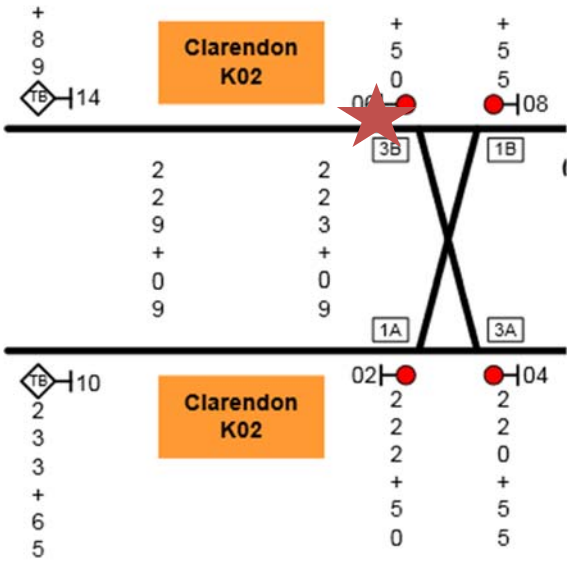
A Crime Scene Search (CSS) officer responded to the Clarendon Station, Track 2 to perform a site assessment. The CSS officer was able to find a trace of blood in the platform area where the injured person had traversed, additionally, a significant amount of blood was found in the general area where the unidentified item was observed in the forward-facing NVR of Car 7130.

Incident Site

Outside of Clarendon Station, Track 2

Field Sketch/Schematics

**Incident Location is approximated based on video review and MTPD report*



Purpose and Scope

The purpose of this incident investigation 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
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information.
- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:
  - National Oceanic and Atmospheric Administration (NOAA) data
  - MTPD Executive Briefing
- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
  - Audio Recording System (ARS) playback
  - Closed-Circuit Television (CCTV)

Investigation

The ROCC Assistant Superintendent received a report from a WMATA employee that their son had been struck by an unknown train at an unknown station. Based on the information provided

to MTPD by the person's family member, the injured person contacted them on May 9, 2021, at approximately 07:18 hours from a nearby gas station and stated that they had been struck by a train. The family member picked up the injured person from the Tysons Corner Station on May 9, 2021, at approximately 08:05 hours, transported them to Southern Maryland Hospital, and they were eventually medevacked to MedStar Washington Hospital Center.

An MTPD Lieutenant responded to MedStar Washington Hospital Center on May 9, 2021, to interview the injured person; the injured person stated that they had changed trains at Metro Center Station, were walking between cars, and fell. The person reported that they attempted to hold on but eventually fell onto the tracks somewhere in the tunnel between stations. They climbed onto an unknown station and boarded another train.

A review of the NVR of all the interior cameras of Train ID 602 Cars 7130-**31**x7087-86x7248-49x7141-40 did not reveal any relevant information; the forward-facing camera of the Train ID 605 **L7220**-21x7203-02x7222-23x7033-32T consist arriving at the platform before the injured person entered the planform showed an unidentified item on the roadway, which could potentially have been the injured person, laying near the third rail on Track 2 just before the Clarendon Station.

On May 10, a Crime Scene Search (CSS) officer responded to the Clarendon Station, Track 2 to perform a site assessment; the CSS officer was able to find a trace of blood in the platform area where the injured person had traversed, additionally, a significant amount of blood was found in the area where the unidentified item was observed in the forward-facing NVR of Car 7130.

Chronological Event Timeline

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

Time	Description
5/8/2021 20:58 hours	The person entered the WMATA system at Gallery Place Station. They traveled to Metro Center Station (WMATA Station CCTV).
5/8/2021 21:11 hours	The person boarded the second car of Train ID 602 (L7130-**31**x7087-86x7248-49x7141-40T). Station CCTV revealed the person in their seat as the consist traveled through McPherson Square Station and Farragut West Station; however, the angle of the cameras did not allow a clear view at Foggy Bottom station and Rosslyn Station (WMATA Station CCTV).
5/8/2021 21:22 hours	The Court House Station CCTV revealed that the person was no longer seated at their previous location (WMATA Station CCTV).
5/8/2021 22:22 hours	The Clarendon Station CCTV revealed a person entered the Clarendon Station's platform, Track 2 on the Court House Station side (WMATA Station CCTV).
5/8/2021 23:45 hours	The Vienna Station CCTV revealed the person alighting at the Station from Train ID 901 Car 7082 (7160-61x7147-46x7266-67x7083-**82**) (WMATA Station CCTV).
5/8/2021 23:03 hours	Fairfax Connector Bus Supervisor reviewed their station CCTV and revealed that the person boarded Bus 9684. The person showed signs of being injured (Fairfax Connector CCTV).

Time	Description
5/8/2021 23:24 hours	The Tysons Corner Station CCTV revealed the person entered the station from the direction of Bus Bay. The person was observed holding their right arm, did not have shoes on, and appeared in disarray (WMATA Station CCTV).
5/9/2021 08:55 hours	ROCC Assistant Superintendent received a report from a WMATA employee that their son had been struck by an unknown train at an unknown station.
5/9/2021 09:18 hours	MTPD Communications received a call for service reporting a person had been struck by a train (phone).

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

Interview Findings (adopted from MTPD report)

An MTPD Detective responded to Southern Maryland Hospital; based on information provided by the person's family member, the injured person contacted them on May 9, 2021, at approximately 07:18 hours from a nearby gas station and stated that they had been struck by a train. The family member picked up the injured person from the Tyson's Corner Station on May 9, 2021, at approximately 08:05 hours, transported them to Southern Maryland Hospital, and they were in the process of being medevacked to MedStar Washington Hospital Center.

An MTPD Lieutenant responded to MedStar Washington Hospital Center to interview the injured person; the injured person stated that they had changed trains at Metro Center Station, was walking between cars, and fell. They attempted to hold on but eventually fell onto the tracks somewhere in the tunnel between stations. They climbed onto an unknown station and boarded another train.

Weather

At the time of the incident, NOAA recorded the temperature at 52° F, winds NW to SE at 6 mph, clear with visibility of 10 miles. Humidity was at 50%. Based on findings, SAFE has concluded that weather was not a contributing factor in this incident (Weather source: NOAA – Location: Washington, DC.)

Human Factors

N/A

Findings

- The ROCC Assistant Superintendent notified MTPD of the event.
- MTPD on-site investigation revealed traces of blood at Clarendon Station, Track 2, leading to the roadway.
- Rail car NVR downloaded from car 7220 showed an unidentified item on the roadway that appeared to be a person.
- MTPD on-site investigation of the roadway revealed a significant amount of blood where the unidentified item was observed.

Immediate Mitigation to Prevent Recurrence

- None

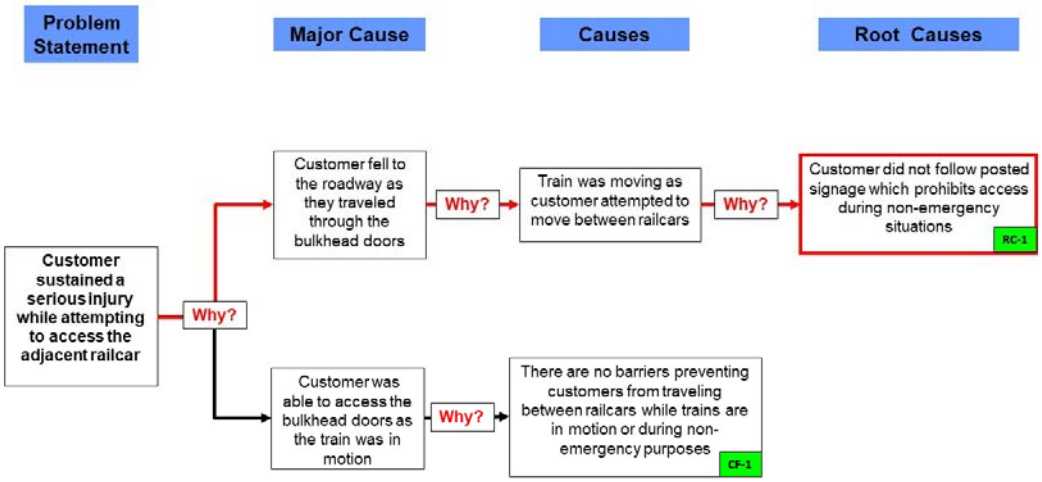
Probable Cause Statement

The probable cause of this event was failure to follow posted signage which prohibits customers from passing through WMATA railcar bulkhead doors, except for emergency purposes.

SAFE Recommendations/Corrective Actions

As the injured person bypassed standard warning devices in order to access bulkhead doors, there are no immediate recommendations or corrective actions related to this incident. The doors in question are required to remain accessible for use during emergencies and cannot be secured as part of normal operations. WMATA will continue to work to identify solutions to the prevent unauthorized persons from moving between rail cars while remaining compliant with emergency evacuation requirements.

Appendix A - Root Cause Analysis



Root Cause Analysis

Appendix B - Spots Reports

ID	Platform	length	dcode	Right door open	Right door close	dwell	Left door open	Left door close	dwell	Head Arrived	Tail cleared	cars	Headway door open to door open
602	D06-2	8	64				21:01:44	21:02:04	20	21:01:06	21:02:28	7130-7131.7087-7086.7248-7249.7141-7140	-
602	D05-2	8	64				21:03:31	21:03:52	21	21:02:57	21:04:14	7130-7131.7087-7086.7248-7249.7141-7140	1:47
602	D04-2	8	64				21:05:22	21:05:42	20	21:04:42	21:06:06	7130-7131.7087-7086.7248-7249.7141-7140	1:51
602	D03-2	8	64				21:06:58	21:07:18	20	21:06:16	21:07:44	7130-7131.7087-7086.7248-7249.7141-7140	1:36
602	D02-2	8	64	21:08:41	21:09:02	21				21:08:09	21:09:22	7130-7131.7087-7086.7248-7249.7141-7140	1:43
602	D01-2	8	64				21:10:16	21:10:40	24	21:09:37	21:11:06	7130-7131.7087-7086.7248-7249.7141-7140	1:35
602	C01-2	8	64				21:11:51	21:12:11	20	21:11:12	21:12:36	7130-7131.7087-7086.7248-7249.7141-7140	1:35
602	C02-2	8	64	21:13:31	21:13:54	23				21:13:01	21:14:13	7130-7131.7087-7086.7248-7249.7141-7140	1:40
602	C03-2	8	64	21:15:00	21:15:26	26				21:14:29	21:15:49	7130-7131.7087-7086.7248-7249.7141-7140	1:29
602	C04-2	8	64				21:16:54	21:17:15	21	21:16:17	21:17:38	7130-7131.7087-7086.7248-7249.7141-7140	1:54
602	C05-2	8	64				21:19:48	21:20:07	19	21:19:10	21:20:34	7130-7131.7087-7086.7248-7249.7141-7140	2:54
602	K01-2	8	64				21:22:49	21:23:09	20	21:22:01	21:23:33	7130-7131.7087-7086.7248-7249.7141-7140	3:01
602	K02-2	8	64	21:24:29	21:24:48	19				21:23:57	21:25:08	7130-7131.7087-7086.7248-7249.7141-7140	1:40
602	K03-2	8	64	21:26:03	21:26:21	18				21:25:32	21:26:42	7130-7131.7087-7086.7248-7249.7141-7140	1:34
602	K04-2	8	64	21:27:48	21:29:00	72				21:27:15	21:29:23	7130-7131.7087-7086.7248-7249.7141-7140	1:45
602	K05-2	8	64				21:32:57	21:33:16	19	21:32:11	21:33:41	7130-7131.7087-7086.7248-7249.7141-7140	5:09
602	N01-2	8	64				21:40:11	21:40:23	12	21:39:33	21:40:46	7130-7131.7087-7086.7248-7249.7141-7140	7:14
602	N02-2	8	64				21:42:00	21:42:12	12	21:41:23	21:42:39	7130-7131.7087-7086.7248-7249.7141-7140	1:49
602	N03-2	8	64				21:44:09	21:44:21	12	21:43:33	21:44:47	7130-7131.7087-7086.7248-7249.7141-7140	2:09
602	N04-2	8	64				21:46:08	21:46:31	23	21:45:27	21:46:58	7130-7131.7087-7086.7248-7249.7141-7140	1:59
602	N06-2	8	64				21:54:03	21:54:21	18	21:53:28	21:55:32	7130-7131.7087-7086.7248-7249.7141-7140	7:55

Figure 1 - Train ID 602, the second consist boarded by the injured person prior to exiting the roadway at Clarendon Station, Track 2 (most likely the consist the injured person fell from).

ID	Platform	length	dcode	Right door open	Right door close	dwell	Left door open	Left door close	dwell	Head Arrived	Tail cleared	cars	Travel Time door open to door open
605	C05-2	8	64				22:03:09	22:03:28	19	22:02:24	22:03:59	7032-7033.7223-7222.7202-7203.7221-7220	-
605	K01-2	8	64				22:06:11	22:06:31	20	22:05:29	22:06:57	7032-7033.7223-7222.7202-7203.7221-7220	3:02
605	K02-2	8	64	22:08:06	22:08:24	18				22:07:25	22:08:50	7032-7033.7223-7222.7202-7203.7221-7220	1:55
605	K03-2	8	64	22:09:57	22:10:18	21				22:09:14	22:10:44	7032-7033.7223-7222.7202-7203.7221-7220	1:51
605	K04-2	8	64	22:11:56	22:12:15	19				22:11:17	22:12:37	7032-7033.7223-7222.7202-7203.7221-7220	1:59
605	K05-2	8	64				22:16:29	22:16:50	21	22:15:45	22:17:28	7032-7033.7223-7222.7202-7203.7221-7220	4:33
605	N01-2	8	64				22:24:09	22:24:23	14	22:23:27	22:24:54	7032-7033.7223-7222.7202-7203.7221-7220	7:40
605	N02-2	8	64				22:26:16	22:26:30	14	22:25:32	22:26:59	7032-7033.7223-7222.7202-7203.7221-7220	2:07
605	N03-2	8	64				22:28:34	22:28:55	21	22:27:53	22:29:23	7032-7033.7223-7222.7202-7203.7221-7220	2:18
605	N04-2	8	64				22:30:51	22:31:13	22	22:30:05	22:31:38	7032-7033.7223-7222.7202-7203.7221-7220	2:17
605	N06-2	8	64				22:39:25	22:39:55	30	22:38:30	22:40:46	7032-7033.7223-7222.7202-7203.7221-7220	8:34

Figure 2 - Train ID 605 NVR showed an unidentified item on the roadway next to the third rail (possibly the injured person).

Appendix C – Sample Bulkhead Railcar Signage

Picture 3 – Sample bulkhead signage on WMATA Railcar prohibiting passage except for emergency use only. (6000 series).

Appendix C – Sample Bulkhead Railcar Signage

Picture 2 – Sample bulkhead signage on WMATA Railcar prohibiting passage except for emergency use only. (7000 series).