



## W-0350 – Improper Roadway Worker Protection – Benning Road Station – April 27, 2024

### Document Purpose:

*This WMSC written report on WMATA Metrorail's safety event investigations and review of Metrorail's findings in accordance with the WMSC Program Standard, in conjunction with the attached Metrorail investigation reports that have undergone WMSC staff review and, if necessary, feedback and revision, describes the investigation activities, identifies factors causing or contributing to the safety events, and sets forth ongoing, additional, or upcoming corrective actions and further oversight work (such as inspections and audits) as necessary or appropriate. The WMSC's ongoing oversight during the investigative process, including safety event reporting and verification, participation in investigative interviews, data review, consistent communication with the Metrorail investigations team, and feedback on Metrorail's reports leads to further improvements prior to consideration of the reports by WMSC Commissioners for adoption. The WMSC's safety event investigation oversight assures the sufficiency and thoroughness of Metrorail's investigations. The WMSC Commissioners are considering these documents (the WMSC review and Metrorail's investigation reports) as a unified item for adoption at the Washington Metrorail Safety Commission meeting on December 10, 2024.*

*WMSC staff recommend adoption of this investigation.*

### Roadway Worker Protection

The [WMSC's audit of Metrorail's Roadway Worker Protection Programs](#), issued on July 31, 2024, demonstrates that although Metrorail has established policies and procedures, rules, training, and oversight of its RWP program, there are still deficiencies that put the safety of workers at risk. During this audit, WMSC personnel observed unsafe practices contrary to Metrorail policies and procedures at every observation activity conducted. As further explained in Finding 1 of the audit report, Metrorail is not effectively ensuring that its personnel on and around the roadway are consistently following the Roadway Worker Protection rules designed for their safety. This increases the risk that personnel may be injured or killed. Between 2005 and 2010, eight Metrorail employees were struck and killed by rail vehicles. In the years since, there have been several near miss collisions with roadway workers, including a 2016 safety event where Federal Transit Administration (FTA) track inspectors were forced to jump out of the path of a train to avoid being hit. Since then, there have been near misses that include workers narrowly escaping a fatal collision, including events that occurred in 2021, 2022, and 2023.

Metrorail has developed and the WMSC is reviewing proposed corrective action plans created in accordance with the Program Standard to address the 13 findings of the RWP Audit issues in July 2024. These build on immediate mitigations and initial steps to correct outdated materials and communicate the importance of safety rules that Metrorail took based on the WMSC's communication of safety issues as those issues were observed and validated during the audit process.

### Safety event summary:

While observing a WMATA full-scale exercise at Benning Road Station, WMSC personnel identified what they believed to be a possible Roadway Worker Protection (RWP) violation that was reported to WMATA officials on the scene and



later confirmed following a full investigation. The violation occurred when WMATA personnel participating in a full-scale exercise at the station did not report to mobile command for a safety briefing as required by Metrorail policy, but instead reported directly to the station to begin work on the roadway. The full-scale exercise, which included a scenario of a fire and person struck by a train, was conducted in partnership with D.C. Fire and Emergency Medical Services. This required WMATA personnel from the Office of Track and Structure to enter the roadway to install safety equipment, including shunts, mats and lights to identify working limits for the exercise. The exercise was being conducted at Benning Road Station, which was a part of a shutdown for scheduled track maintenance between Stadium-Armory and Cheverly stations on the Orange Line and Stadium-Armory and Addison Road stations on the Blue and Silver lines.

The Employee-In-Charge (EIC), attended the safety briefing given at the full-scale exercise, but did not receive the required Roadway Job Safety Briefing from Mobile Command (Roadway Working In Charge), located offsite at the D&G Junction. The EIC completed the Roadway Job Safety Briefing (RJSB) form, but did not conduct the briefing with their crew. Instead, they assigned this responsibility to a crew member. Members of the crew did not sign the Roadway Job Safety Briefing form, as required by Metrorail policy. The EIC signed the form despite not conducting the briefing.

The crew was granted permission by Mobile Command, who did not confirm that the EIC attended a job safety briefing, to enter the roadway at Benning Road Station to conduct their work.

The WMSC requested several documents related to this event. An investigative review of the documents, including the Mobile Command Briefing Script, showed incomplete or inaccurate information, such as incorrect full-scale exercise facilitator and inaccurate information about if stations were open within the working limits.

During an investigative interview, the EIC stated that they had on previous occasions set up safety equipment before conducting a job safety briefing, demonstrating a pattern of non-compliance and unsafe practices. RWP rules and procedures vary during shutdowns when Mobile Command is activated and these rules sometime contradict rules in the Metrorail Operating Rulebook, which can lead to confusion and inconsistent practices.

This RWP violation was not reported to WMATA's Office of Safety Investigations until May 7, 2024,

The causes and contributing factors include:

- Non-compliance with written operational rules and procedures
- Lack of supervisor oversight to ensure personnel complied with written RWP rules and procedures

As a result of this investigation, WMATA implemented corrective actions, including:

- Review of all scripts for accuracy and include the RJSB form in all briefing books and locations
- Re-writing the SOP for Mobile Command to address roles and responsibilities
- Review of the procedures for piggybacking and joint occupancy
- Refresher RWP training for the EIC

Related corrective actions:

- CAP C-0286 addresses the 2024 RWP audit finding that Metrorail is not following its existing safety rules and does not have adequate training and supervisory oversight to ensure safe operation under mobile command. (in development)



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

**FINAL REPORT OF INVESTIGATION A&I E24400**

<b>Date of Event:</b>	April 27, 2024
<b>Type of Event:</b>	Improper Roadway Worker Protection
<b>Incident Time:</b>	07:19 hours
<b>Location:</b>	Benning Road Station, track 2
<b>Time and How received by SAFE:</b>	April 29, 2024 – 16:19 hours – Office of Operating Practices (OOP)
<b>WMSC Notification Time:</b>	May 7, 2024 – 11:47 hours
<b>Responding Safety Officers:</b>	None
<b>Rail Vehicle:</b>	N/A
<b>Injuries:</b>	N/A
<b>Damage:</b>	N/A
<b>Emergency Responders:</b>	N/A
<b>SMS I/A Number</b>	20240523#117119

# Benning Road Station – Improper Roadway Worker Protection

April 27, 2024

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## **Abbreviations and Acronyms**

<b>AIMS</b>	Advanced Information Management System
<b>ARS</b>	Audio Recording System
<b>CCTV</b>	Closed-Circuit Television
<b>EIC</b>	Employee-in-Charge
<b>MICC</b>	Metro Integrated Command and Communications Center
<b>MOR</b>	Metrorail Operating Rulebook
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>OEP</b>	Office of Emergency Preparedness
<b>OOP</b>	Office of Operating Practices
<b>OSI</b>	Office of Safety Investigations
<b>RJSB</b>	Roadway Job Safety Briefing
<b>RSA</b>	Rail Service Adjustment
<b>RTRA</b>	Office of Rail Transportation
<b>RWP</b>	Roadway Worker Protection
<b>SAFE</b>	Department of Safety
<b>SMS</b>	Safety Measurement System
<b>TRST</b>	Department of Track and Structures
<b>WMATA</b>	Washington Metropolitan Area Transit Authority
<b>WMSC</b>	Washington Metrorail Safety Commission
<b>WPMI</b>	Work Planning and Maintenance Improvement

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

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**Executive Summary**

*\*Note that all times listed are approximate and may contain minor variations due to differences between systems of record. \**

On Saturday, April 27, 2024, the Office of Video and Consequence Management conducted a Full-Scale Exercise at Benning Road Station. The Full-Scale Exercise was conducted in partnership with the DC Fire and Emergency Medical Services Department and included a scenario involving a simulated fire and a person struck by a train.

On Monday, April 29, 2024, the WMSC Subject Matter Expert – Operations advised the WMATA Director of Operating Practices of a potential Roadway Worker Protection (RWP) violation that occurred during a full-scale exercise at Benning Road Station on Saturday, April 27, 2024.

On Tuesday, May 7, 2024, the Office of Safety Investigations (OSI) was notified of the Improper RWP event. The investigation revealed that the Office of Track and Structures Employee-In-Charge (EIC) and workgroup assigned to set up the piggyback crew work location for the Full-Scale Exercise did not report to Mobile Command to attend a Safety Briefing but reported directly to Benning Road Station.

The EIC completed the Roadway Job Safety Briefing (RJSB) Form, then delegated the responsibility of conducting the RJSB to a member of their work crew for the personnel at Benning Road Station, and members of the work crew did not sign the RJSB Form.

Mobile Command granted permission to the EIC to enter the roadway to install safety equipment although the EIC did not attend the Safety Briefing at Mobile Command.

At 07:19 hours, the EIC and one other crew member walked to the inbound end of the platform and onto the roadway to set up safety equipment.

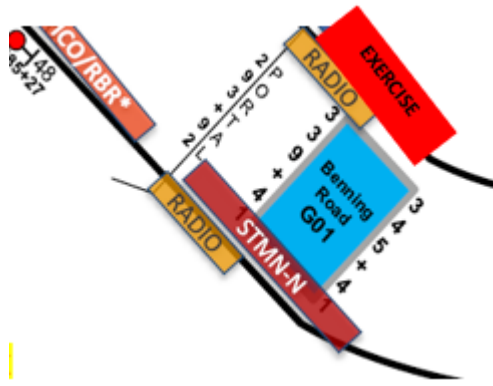
The Rail Service Adjustment (RSA), Mobile Command Safety Briefing Script, and Form O – Joint Occupancy of Working Limits Logs showed inaccurate and/or incomplete details and information.

The probable cause of the Improper RWP event on April 27, 2024, at Benning Road Station was a lack of awareness by the EIC. The EIC failed to attend the required safety briefing at Mobile Command and failed to conduct their RJSB with their piggyback crew before entering the roadway to place safety equipment. A contributing factor is that Mobile Command granted the EIC permission to enter the roadway without verifying if they attended the safety briefing at Mobile Command.

**Incident Site**

Benning Road Station is an indoor station with a center platform. track 2

## 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

The investigative methodologies included the following:

- Site assessment through document review
- Formal Interviews – SAFE interviewed two individuals as part of this investigation. The interview included persons present at, during, and after the incident, those directly involved in the response process, and representatives from the Washington Metrorail Safety Commission (WMSC). SAFE interviewed the following individuals:
  - Mobile Command (RWIC)
  - Employee-In-Charge (EIC)
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Written statements were reviewed from personnel present during the event.
- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:
  - Metrorail Operating Rulebook (MOR)
  - National Oceanic and Atmospheric Administration (NOAA)
  - Roadway Job Safety Briefing Form
  - Joint Occupancy Form
  - WWPL Final Work Package
  - Mobile Command Log
  - Mobile Command Safety Briefing Sign In Sheets
- 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**

On Saturday, April 27, 2024, the Office of Video and Consequence Management conducted a Full-Scale Exercise at Benning Road Station. The Full-Scale Exercise was conducted in partnership with the DC Fire and Emergency Medical Services Department and included a scenario involving a simulated fire and a person struck by a train.

When the Full-Scale Exercise was completed, the WMSC Subject Matter Expert – Operations reported, *“After receiving permission from the Mobile Command Center, the employee-in-charge (EIC) instructed the crew members to access the roadway and install the required safety equipment. No RJSB was conducted as required by MOR Rule 17.21.7.”*

In addition to the report the WMSC Subject Matter Expert – Operations requested that WMATA respond with a plan to address the identified RWP violation and to provide the following,

1. *All RJSB conducted by Mobile Command on Saturday, April 27, 2024, from 0000 hours to 1200 hours.*
2. *A copy of the roadway job safety briefing scripts used by mobile command*
3. *A copy of the playbook used for the Blue/Silver Line Mobile Command work area*
4. *A copy of the completed Mobile Command Form-O-Logbook for Saturday, April 27, 2024, from 0000 hours to 1200 hours.*

On May 3, 2024, the WMATA Director of Operating Practices provided the requested documentation to the WMSC Subject Matter Expert – Operations.

On May 6, 2024, the WMSC Subject Matter Expert – Operations responded and noted that the RWP violation was not addressed, and additionally requested a response to the following,

1. *Provide the signed RJSBs for the specified time.*
2. *Provide the signed RJSB form completed by Mobile Command with the Employee In Charge (EIC) signature highlighted.*
3. *The WMATA employee who provided the safety briefing to the OEP personnel on behalf of the EIC is not identified on the RJSB form. Additionally, there was no documentation that the WMATA employee providing the safety briefing was briefed by the EIC or Mobile Command.*
4. *The RJSB for the OEP personnel that was received on May 3, 2024, differs from the picture taken by the WMSC of the RJSB form completed and signed by the crew in attendance.*
5. *The weekend shutdown playbook received, D98-D11-G03 WEEKEND SHUTDOWN APRIL 27-29, 2024, confirms the presence of OEP as a piggyback crew, but the RJSB script used by Mobile Command omitted the presence of the OEP piggyback work crew and its inclusion of the full-scale exercise. The script incorrectly stated that no stations would be closed.*
6. *A review of the Form-O-Logbook received does not show that Mobile Command (RWIC) marked an “X” through the logbook as required.*

On Tuesday, May 7, 2024, the Office of Safety Investigations (OSI) was notified of the Improper RWP event, as reported by the WMSC Subject Matter Expert – Operations.



The investigation revealed that on Saturday, April 27, 2024, track maintenance was scheduled on the Orange/Blue/Silver Line. At 07:00 hours, the stations between Stadium-Armory Station to Cheverly Station/Addison Road Station were shutdown. The Office of Video and Consequence Management conducted a Full-Scale Exercise at Benning Road Station as a piggyback work crew under the track maintenance shutdown.

The Full-Scale Exercise was conducted at Benning Road Station between chain markers G2 325+00 to 345+00 and consisted of an operational exercise of a simulated fire, and a person struck by a train scenario, allowing regional partners and Metro emergency responders to implement protocols for a rapid response to an incident and practice tunnel fan operation and safety protocols.

Personnel from the Offices of Video and Consequence Management, Rail Operations, Metro Transit Police Department, Track and Structures, Car Maintenance, Emergency Preparedness, and the Washington Metropolitan Safety Commission attended the Full-Scale Exercise.

The Mobile Command<sup>1</sup> (Roadway Worker in Charge) was located at the D&G Junction (Pepco Parking Lot) to conduct safety briefings.

The EIC with a work crew of three (3) personnel was assigned to set up the piggyback crew work location for the Full-Scale Exercise.

The EIC and work crew reported directly to the Full-Scale Exercise and did not report to Mobile Command to attend the safety briefing, as required under the Metrorail Operating Rulebook (MOR) 17.9.3<sup>2</sup> and did not sign the Roadway Job Safety Briefing (RJSB) form. The EIC attended the RJSB conducted at the full-scale exercise but not the one required for all EICs at Mobile Command.

The EIC completed the RJSB Form and then delegated the responsibility of conducting the safety briefing to a member of their work crew for the personnel at Benning Road Station, as they prepared safety equipment to install on the roadway.

At 07:14 hours, the EIC requested and was granted permission by Mobile Command to enter the roadway to install safety equipment although the EIC did not receive an RJSB<sup>3</sup>. Mobile Command confirms an employee attended a safety briefing via radio when the employee requested permission to enter the roadway.

At 07:19 hours, the Closed-Circuit Television (CCTV) revealed that the EIC and one other crew member walked to the inbound end of the platform to set up safety equipment with two WMSC representatives following. The EIC and crew member walked past the end gate and the WMSC representatives stopped at the end gate. Two TRST personnel walked to the outbound end of the

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<sup>1</sup> MOR – 17.9.2, The Mobile Command Center may be activated and may function as the RWIC of working limits during extended outages and shutdowns.

<sup>2</sup> All Employees-In-Charge shall report to the Mobile Command Center prior to accessing the work area.

<sup>3</sup> MOR – 17.21.2, Prior to granting authorization, the RWIC of the working limits must: a. Perform a Roadway Job Safety Briefing with the Employee-In-Charge of the Piggyback Work Crew and the Roadway Workers who were part of the original work group, b. Verify that the employee responsible for protecting the additional work group is qualified as an RWIC, c. Complete the Form O – Joint Occupancy of Working Limits form.

platform to set up safety equipment. There is misunderstanding of the RWP rules for piggyback crews during shutdowns.

At 07:28 hours, the EIC returned to the platform after setting up the safety equipment for the Full-Scale Exercise, and at 11:46 hours, the Full-Scale Exercise ended.

The Rail Service Adjustment (RSA) incorrectly identified OEP as the piggyback work crew as facilitators of the Full-Scale Exercise. Planning and Exercise were responsible for facilitating the exercise, the department has been renamed to Consequence Management. The work packets were completed prior to the name change.

The Mobile Command Safety Briefing Script incorrectly stated that “No stations will be closed within the working limits.” The Form O – Joint Occupancy of Working Limits Logs were not marked with an “X” by Mobile Command before returning the track to service as required under MOR 17.21.6<sup>4</sup>.

### Chronological Event Timeline

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

Time	Description
05:40 hours	WMATA employees start to arrive at Benning Road Station. [CCTV]
05:50 hours	Consequence Management staff started to set up check-in tables near the kiosk. [CCTV]
06:22 hours	DCFEMS personnel started to arrive and check-in. [CCTV]
06:31 hours	MTPD personnel started to arrive and check-in. [CCTV]
06:42 hours	The Consequence Management personnel started giving the safety brief for the full-scale exercise. The EIC and their crew members were present. [CCTV]
07:05 hours	It appeared that the safety briefing was completed, and personnel started to go to the kiosk area to sign a roster and receive wristbands. [CCTV]
07:14 hours	<u>EIC:</u> Contacted Mobile Command and requested permission to enter the roadway. <u>Mobile Command:</u> Granted the EIC permission to enter the roadway. [Ops. 12]
07:19 hours	The EIC and one other crew member walked to the inbound end of the station to set up safety equipment with two WMSC representatives following behind them. The EIC and crew member went past the end gate and the WMSC representatives stopped there. The two other TRST personnel went to the outbound end to set up safety equipment. [CCTV]
07:28 hours	The two TRST personnel on the outbound end can be seen returning to the platform. [CCTV]
07:42 hours	The EIC and crew member returned to the platform. When they returned to the platform, the WMSC representatives appeared to be speaking to the EIC. [CCTV]
07:43 hours	It appeared that the smaller group RJSB was being conducted on the platform. [CCTV]

<sup>4</sup> Prior to returning the track to service, the RWIC of the working limits must verify that all Piggyback Work Crews given authority to occupy or foul a track have reported clear. When the track is returned to service, the RWIC of the working limits must mark an “X” through the Form O – Joint Occupancy of Working Limits form and retain it for (7) days for inspection.

Time	Description
11:46 hours	<u>EIC</u> : Contacted Mobile Command to inform them that the full scale exercise was completed, and personnel and safety equipment were cleared from the roadway. <u>Mobile Command</u> : Acknowledged the transmission. [Ops. 12]

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

### **Work Planning and Maintenance Improvement (WPMI)**

*\*Adopted from WPMI response to the WMSC\**

Mobile Command maintains a log for radio communication and phone calls. Mobile Command had the EIC call into the location for the Consequence Management exercise at 07:14 and cleared the area at 11:36.

Unable to provide evidence that the EIC attended a safety briefing because it does not appear on Mobile Command signature sheets during this timeframe. Mobile Command provided signature sheets during the weekend for review. Unable to discern, the safety briefing provided overall safety information on the shutdown area. If a supplemental RJSB was complete, as required by MOR 17.21.7, then there would be 2 briefing sheets with different information based on specific safety requirements. OEP was re-org into Consequence Management. The Safety briefing was up to date vs the power play based on information prior to the Re-org.

WWPL will implement a Corrective Action to review all Scripts for accuracy and include the RJSB form in all briefing books and locations. As designated by the sponsor, WWPL management has informed direct reports to review section 17.21.6 and to ensure all rules within the MOR are followed.

### **Interview Findings**

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

#### Employee-In-Charge

- This was the EIC's first time setting up a work zone for a full-scale exercise.
- The EIC has worked previous weekend shutdowns as an EIC.
- The EIC knew they were required to attend a safety briefing at Mobile Command.
- The EIC reported directly to Benning Road Station and not Mobile Command first.
- The EIC thought they attended a safety briefing by Mobile Command at Benning Road Station and signed the sign-in sheet.
- The EIC had three other TRST personnel working with them.
- The EIC contacted Mobile Command and was granted permission to enter the roadway.
- The EIC and the three crew members entered the roadway to set up the safety equipment.
- The EIC delegated one of the crew members to conduct the RJSB after the safety equipment was set up.
- The EIC signed the RJSB, not the person who conducted it.
- The EIC said they set up their safety equipment before conducting their RJSB during normal track work or planned shutdowns contrary to established procedures.

- The EIC said no one informed them they did something incorrect during the full-scale exercise.

### Mobile Command (RWIC)

- The RWIC has worked in Mobile Command as the RWIC for all previous shutdowns.
- The RWIC operated the radio on the day of the incident.
- The RWIC stated they verify if an employee attended the Mobile Command Safety Briefing by radio when personnel requests permission to enter the roadway.
- The RWIC stated they use Safety Briefers to conduct the shutdown safety briefings to employees not the RWIC in Mobile Command.
- They stated that Mobile Command is always inside in a remote location.

### **Weather**

On April 27, 2024, at the time of the incident, NOAA recorded the temperature as 60°F, with clear skies, winds 10 mph, and 84% humidity. The weather was not a contributing factor in this incident (Weather source: NOAA) – Location: [Washington, DC].

### **Related Rules and Procedures**

#### Metrorail Operating Rulebook (MOR)

- 17.5.1: The Roadway Job Safety Briefing must be conducted by the RWIC and must include each roadway worker
- 17.8.3 Crew Leaders:
  - F. Shall notify the RWIC when the piggyback work zone is set up properly
- 17.9.3: All Employees-In-Charge shall report to the Mobile Command Center prior to accessing the work area.
- 17.21.2 Prior to granting authorization, the RWIC of the working limits must:
  - Perform a roadway job safety briefing with the Employee-In-Charge of the Piggyback work crew and the roadway workers who were part of the original work group.
- 17.21.7 After receiving authorization from the RWIC to establish a work zone within the existing working limits, the Employee-In-Charge must conduct a roadway job safety briefing with all members of the additional work crew.
- 17.21.10 The Employee-In-Charge of a piggyback work crew must promptly notify the RWIC once their working limits have been cleared. Prior to reporting clear to the RWIC, the Employee-In-Charge must ensure the following:
  - All material, parts, and debris have been removed,
  - All crew personnel and safety equipment are clear of the track(s) and in a place of safety.

## Human Factors

### Evidence of Fatigue

The biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied for this event.

### Fatigue Risk

The biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied for this event.

### Post-Incident Toxicology Testing

Post-Incident Toxicology Testing was not conducted for this event.

## **Findings**

- The EIC did not attend the Mobile Command RJSB at the designated location.
- The EIC attended the RJSB conducted at the full-scale exercise but not the one required for all EICs.
- Mobile Command granted the EIC permission to enter the roadway to set up their work location although they had not attended the Mobile Command RJSB.
- Having multiple sign-in locations during a shutdown, may create an issue of Mobile Command not having a current or accurate list of personnel that have completed the Mobile Command RJSB before granting them permission.
- Mobile Command did not inquire via radio when the EIC requested permission to enter the roadway if the EIC completed the Mobile Command RJSB.
- At 07:14 hours, the Mobile Command granted the EIC permission to enter the roadway to set up their piggyback location.
- Mobile Command documented on the Form-O Logbook when the EIC entered and exited the roadway.
- RWP rules and procedures vary during shutdowns when Mobile Command is activated.
- RWP rules during Mobile Command contradicts rules in the MOR.
- The EIC delegated one of their crew members to conduct the RJSB.
- RWP Level 4 RWIC/EICs are not allowed to delegate another RWP Level 4 to conduct their RJSB but it seems to be a practice.

## **Immediate Mitigation to Prevent Recurrence**

- WPMI will implement a Corrective Action to review all Scripts for accuracy and include the RJSB form in all briefing books and locations.

## **Probable Cause Statement**

The probable cause of the Improper RWP event on April 27, 2024, at Benning Road Station was a lack of awareness by the EIC. The EIC failed to attend the required safety briefing at Mobile Command and failed to conduct their RJSB with their piggyback crew before entering the roadway to place safety equipment. A contributing factor is that Mobile Command granted the EIC permission to enter the roadway without verifying if they attended the safety briefing at Mobile Command.

## **Recommended Corrective Actions**

<b>Corrective Action Code</b>	<b>Description</b>	<b>Responsible Party</b>	<b>Estimated Completion Date</b>
117119_SAFEC APS_WPMI_00 1	WPMI will re-write the SOP for Mobile Command to address roles and responsibilities.	WPMI SRC	10/30/2024
117119_SAFEC APS_WPMI_00 2	WPMI will review all scripts for accuracy and include the RJSB form to all briefing books and locations as designated by the Sponsor.	WPMI SRC	Completed
117119_SAFEC APS_WPMI_00 3	WPMI management will inform direct reports to review section 17.21.6 and to ensure all rules within the MOR are followed.	WPMI SRC	Completed
117119_SAFEC APS_OOP_001	The Office of Operating Practice will review the procedures for piggybacking and joint occupancy.	OOP SRC	Completed
117119_SAFEC APS_TRST_001	The EIC will complete RWP Level 4 refresher training emphasizing piggybacking procedures.	TRST SRC	Completed

## Appendices

### **Appendix A – Interview Summaries**

*The narrative below summarizes the interview statements made by the involved personnel. As such, times and details may conflict with the data contained in systems of record.*

#### EIC

The EIC is a WMATA employee with eight and a half (8.5) years of service with three years as a TRST Structural Supervisor. The EIC is RWP Level 4 certified and must recertify in February 2025. The EIC mentioned feeling fully alert right before the incident. The EIC said there were no personal or non-work-related circumstances affecting their sleep.

The EIC stated they did not report to Mobile Command but reported directly to Benning Road Station. During the interview, the EIC mentioned they were briefed by someone from Mobile Command at Benning Road Station. The EIC said they signed a sign-in sheet for the safety briefing they attended. The EIC had three other crew members who helped them set up safety equipment for the piggyback work zone. This was the EIC's first time setting up a work zone for a full-scale exercise. They have worked previous weekend shutdowns as an EIC. The EIC knew they were required to check in with Mobile Command during planned shutdowns. The EIC stated that after they were briefed at Benning Road Station, they contacted Mobile Command via radio to access the roadway. The EIC said it varies who's in Mobile Command when they ask for confirmation if they attended the safety briefing. The EIC said once Mobile Command permits them to access the roadway, they set up their work zone, and then conducted the RJSB with the crew. The EIC delegated one of their crew members to conduct the RJSB but they signed it themselves.

The EIC said after they set up the work zone, two WMSC representatives approached them inquiring how they set up their work zone. The EIC said the WMSC never mentioned any wrongdoing at that time. The EIC was asked if they set up the safety equipment before conducting the RJSB. The EIC responded, "Yes, because you know, you set up the roadway, check all the hazards, make sure everything's fine, and then you brief everybody." The EIC said they do this during regular track work and planned shutdowns. The EIC mentioned a hot wash was completed after each exercise and it was never mentioned that the EIC committed a violation when setting up the work zone.

#### RWIC – Mobile Command

The RWIC is a WMATA employee with eleven (11) years of service with ten years as a Supervisor. The RWIC previously worked in the ROCC. The RWIC is RWP Level 4 certified and must recertify in September 2024. As the RWIC in Mobile Command, they oversee the job site, keep people safe, permit them to enter and exit the tracks, and know where everyone is. The RWIC said they previously worked in Mobile Command for all the shutdowns during their ten years in their current position. They have not experienced any operational issues while in Mobile Command.

The RWIC does not conduct RWIC duties in their daily role. The RWIC said there are always two people in Mobile Command. One person is logging the information and one is on the radio. The RWIC stated they verify if an employee attended the Mobile Command Safety Briefing by radio when they request permission to enter the roadway. The employees typically inform the RWIC that they attended the safety briefing. The RWIC said that during the shutdown, a Crew Leader is allowed to move units within the chain markers of their work area. The RWIC said they use radio Ops. channels 11 and 12 for shutdowns but they typically only use Ops. 12. The RWIC stated

they use Safety Briefers to conduct the shutdown safety briefings to employees not the RWIC in Mobile Command. They stated Mobile Command is always inside in a remote location.



# Appendix B – Roadway Job Safety Briefing

## WAAATA Roadway Job Safety Briefing Form



This form must be completed legibly and accurately and be retained and made available for inspection for a period of 90 days.

### Part 1: General Job Briefing

1	Date: 4/27/24   Time: 06:00	RWIC: [Redacted]
	RWIC Call #: [Redacted]	RWIC Cell Phone #: [Redacted]
2	Safety Contact: wear all PPE at all times	
	RWP Rule: Everybody be RWP qualified before entering work area	
3	Work Location: Benning Rd	
	Job Task(s): OEP exercise	
4	Worksite, Electrical, Chemical, or Environmental Hazards: hazards, poor lighting, tripping hazards, smoke in area	
	PPE Inspected: <input checked="" type="checkbox"/>	Electronic Device Policy Reviewed: <input checked="" type="checkbox"/> Radio Certification Date Inspected: <input checked="" type="checkbox"/>
5	RWP Stickers Inspected: <input checked="" type="checkbox"/>	Tools and Equipment Inspected: <input checked="" type="checkbox"/> Radio Checks Performed: <input checked="" type="checkbox"/>
	What Specialized PPE Will Be Used? Glasses, Flashlight, proper PPE	
6	Emergency Response Plan: meet at platform <sup>or outside</sup> take head count	

### Part 2: RWP Briefing: This section must be filled out before any Roadway Workers enter the Roadway.

\*\*Track Time On/Off: : / : , : / : , : / : \*\*

7	Rail Line: C	Track Number(s): 2	Track Access Guide (TAG) Speed:
	Working Limits Chain Markers: 315+00 - 350+00		
	OPS Radio Channel: 12	OPS Phone Number: 202-617-3500	
	Place of Safety: Platform	Time Needed to Reach Place of Safety: 15	
	Are There Red Hot Spots Within Your Working Limits? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
	Red Hot Spot Chain Markers: 346+00 to 355+00	Red Hot Spot Hazard(s): Restricted view	
8	Form of RWP: IT <input type="checkbox"/> ETO Authority <input checked="" type="checkbox"/> Local Signal Control <input type="checkbox"/> AMF <input type="checkbox"/> FT <input type="checkbox"/>		
	RWP Notes: No electrical devices (Thurs w/ables ear bud)		
9	Advanced Mobile Flagger Call #(s) or Last Name(s): N/A		
	Advanced Mobile Flagger Placement: N/A		
	Watchman/Lookout Placement: N/A		
	Required Site Distance: N/A	Watchman/Lookout Rotation Schedule: N/A	
10	Will There be a Speed Restriction on the Adjacent Track? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
	How Will the Speed Restriction be Implemented? N/A		
11	Will Class 2 Vehicles be Part of the Working Limits? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
	# of Class 2 Vehicles: N/A	Type of Class 2 Vehicles: N/A	

FORM-SAFE-SRM-001-00

52.002 06/22

Attachment 1: RJSB Form page 1 of 2.

Incident Date: 04/27/2024 Time: 07:19 hours  
Final Report – Improper RWP Rev. 1  
E24400

Drafted By: SAFE 703 - 06/25/2024  
Reviewed By: SAFE 707 - 06/27/2024  
Approved By: SAFE 707 - 06/27/2024

**WMATA Roadway Job Safety Briefing Form**



This form must be completed legibly and accurately and be retained and made available for inspection for a period of 90 days.

**Part 2: RWP Briefing, continued:**

Power Outage: Red Tag <input type="checkbox"/> Supervisory <input checked="" type="checkbox"/>		Hot Sticking Chain Markers: W 895	
Red/Supervisory Tag #: <del>2024118515</del> 2024118515		310000	
Red/Supervisory Tag Holder: Mike Command		339+000 -> Was P62	
12 Insulated Mat(s) Color		300100 316100	
Blue <input type="checkbox"/> Red <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Yellow <input type="checkbox"/>			
WSAD Certification Due	WSAD Serial #/Asset ID	WSAD Certification Due	WSAD Serial #/Asset ID
4/15/24	U04236	12/11/24	L03015
8/21/24	U04515	8/21/24	U04725
Will a Piggyback Crew(s) be Working Within Your Working Limits? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
13 Crew Leader/EIC Call #(s): Roman		Piggyback Work Area Chain Markers: 315-350	
Piggyback Work Assignment(s): DEP exercise			

**Part 3: Good Faith Challenge:** The following must be read aloud by the RWIC to the Roadway Workers.

"WMATA guarantees each Roadway Worker the right to challenge, in good faith, the effectiveness of the Roadway Worker Protection being provided. The Roadway Worker making the challenge, and those that are sympathetic to the challenge, shall remain clear of the roadway until the challenge has been resolved."

RWP Issues:	Worker Name(s):
Was the GFC Issue Resolved? Yes <input type="checkbox"/> No <input type="checkbox"/>	

**Part 4: Roadway Worker Acknowledgement**

"I understand and agree with all aspects of the Roadway Job Safety Briefing I just received. I am adequately protected from any train movement or roadway hazards. I understand I have a responsibility to conduct myself in a safe manner at all times."

**ROADWAY WORKERS HAVE THE RIGHT AND RESPONSIBILITY TO INITIATE A GOOD FAITH CHALLENGE WHEN NECESSARY**

Roadway Worker Signature	Employee ID #	Roadway Worker Signature	Employee ID #
[Redacted]	[Redacted]	[Redacted]	[Redacted]

**Part 5: RWIC Signature(s)**

Additional RWIC Comments: 327+000 = Stand pipe end 342+50 = V-Stim (under 4th car) 340+75 = Front of train (gear marker) 325+000 = Smoke/Air machine		
RWIC Signature: [Redacted]	RWIC Employee ID #: [Redacted]	Date: 4/27/24
Relieving RWIC Name:	Relieving RWIC Employee ID #:	
Relieving RWIC Signature:	Date/Time: / / . :	
Relieving RWIC Call #:	Relieving RWIC Cell Phone #:	

Attachment 1: RJSB Form page 2 of 2.

# Appendix C – Form O – Joint Occupancy of Working Limits

FORM-SAFE-SRM-003-00

11/01/2022

## Form O – Joint Occupancy of Working Limits

- This form must be completed by the RWIC of the working limits whenever separate work crews are given authority to occupy or foul the working limits. The RWIC must ensure all work crews are cleared before relinquishing their working limits.  
 - If necessary, more than one sheet may be used per day. There should only be one date per sheet. This record must be retained and made available for inspection for a period of seven (7) days.

RWIC of Working Limits:					Date: 4/27/24	
All Workers Notified of Piggyback Crew	Crew Leader/EIC Name	Crew Leader/EIC Call #	Crew Leader/EIC Cell Phone #	Piggyback Work Area Chain Markers	Piggyback Occupancy Times	
					Time On	Time Off
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	D1/32 294+00 - 300+00	05 : 55	18 : 00
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	G1/G2 288+00 - 306+00	06 : 50	15 : 35
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	G1/G2 417+00 - 423+00	07 : 04	16 : 10
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	D1 283+00 - 284+00	07 : 07	15 : 23
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	G2 315+00 - 350+00	07 : 14	11 : 36

Attachment 2: Form O for incident day..

# Appendix D – Safety Briefing Script for D-Line (D98-D11/G03) Weekend Shutdown

## Safety Briefing Script for D-Line (D98-D11/G03) Weekend Shutdown

**04-27-2024 to 04-28-2024**

ALL safety briefers are to read the briefing out loud for all personnel to hear during the safety briefing.

Hello, My Name is \_\_\_\_\_

This Weekend Shutdown is from: 01:00 on April 27, 2024 until 04:00 on April 28, 2024.

The **RWIC** is \_\_\_\_\_ **TEL#** \_\_\_\_\_ and **PICO/RBIR** is the sponsor.

Today's Date is \_\_\_\_\_, 2024

Safety Rule of the day is: \_\_\_\_\_

The current weather conditions are \_\_\_\_\_

Make sure to stay hydrated at all times.

This briefing is for the Weekend Shutdown D98 and G03; located in the Pepco parking lot.

This is a **Red Tag/LOTO** Power Outage (tag # **2024-118-515A**). The RWIC is the Red Tag holder.

**You must contact the RWIC before Entering or Exiting the work area or ROW.**

The RWIC will be on **OPS-12** and can be reached by phone at **(OPS-12) 202-617-3500 or see schedule**

**All personnel in the Shutdown must wear all required PPE at all times within the shutdown limits.**

The single tracking using Inaccessible Track (IT) protection with wooden ties as the barriers.

The shunts, lights, wooden cross ties and work mats are at Chain Markers: **D1/2 282+63 and D1/2 393+77 G1/2 423+20.**

No stations will be closed within the working limits.

**PICO/RBIR** is the sponsor with **COSI/RADIO**, **TRST/STMN-N**, **TRST/STMN-S** and **CON MGNT** as Piggy-Back work groups.

**Hot Spots: Deanwood Station: D1 368+00 – D1 362+00; Restricted View-Curve: D1 390+00 – D1 368+00**

**Restricted View-Hill/Aerial: D1 316+00 – D1 285+00; Minnesota Avenue Station: D1 322+00 – D1 316+00;**

**Capitol Heights Station: G1 423+00 – A 417+00. In addition, please see insert.**

**Parking:** There is **NO PARKING** in the Kiss-and-Ride lots, Handicap spaces, Bus Loops or on the sidewalks at any Metro station.

### Safety Concerns

- There are RMM's in the work area, be diligent of movement at all times. During any work being performed, a watchman/lookout must be used.
- There are multiple work groups working within the area at all times.
- You must contact the work group leader to enter their area within the single track (after contacting the RWIC).
- Watch for poor footing, poor lighting at night, debris, loose cables, sound hazards, drilling, and obstacles.
- Proper footwear and appropriate PPE are required anytime entering the work area.
- Watch for items that could potentially fall on your feet and cause damage.
- Be mindful of social distancing as well as any other safety precautions that you deem appropriate for yourself.
- Be diligent to not damage any equipment that is located in the work area especially when working, walking or stepping around switch machines.
- Closest Hospitals: Washington Hospital Center (202) 877-7000 and George Washington University Hospital (202) 715-4000.
- **In the event of an Emergency – Call WMATA ROCC OPS-3 (202) 962-1502 or 911.**
- Overall place of safety will be the safety briefing location, Individual work crew leaders will designate the place of safety for their crew.

Are there any questions concerning something I may or may not have covered?

*Attachment 3: This was the Mobile Command Safety Briefers safety script for all employees during the weekend shutdown. The EIC did not receive this briefing on the day of the full-scale exercise, as required.*



2024 REGIONAL EXERCISE PROGRAM  
Series #1 | District of Columbia

**Background**

Consequence Management is building on the success of the 2023 Exercise Series by coordinating a series of first responder emergency response exercises. The 2024 Exercise Program provides for the design, development, and conduct of regional exercises that evaluate and validate interagency response to various types of incidents that impact Metro’s modes of transportation. This year’s program will consist of three exercise series, each series consists of a discussion and an operations-based (e.g., tabletop and full-scale) exercise.

**Exercise Series #1**

This portion of the exercise program will be conducted in the District of Columbia in partnership with the DC Fire and Emergency Medical Services Department and includes a scenario involving a simulated fire and person struck by a train at the Benning Road Metro Station. The series will provide first responders and Metro staff an opportunity to discuss and practice key elements and considerations for responding to a complex incident involving Metrorail customers and employees.

**Tabletop Exercise**



The discussion-based (tabletop) exercise will provide an opportunity for regional partners and Metro internal responders to discuss the process for deployment, response and recovery from start to finish. The exercise will be structured as a plenary session during which participants will be prompted to discuss response priorities for their respective agencies to include elements of rapid response, command, communication, safety, evacuation and recovery.

<b>Date &amp; Time</b>	Wednesday, February 28, 2024 : 8:00 AM – 12:00 PM
<b>Location</b>	District of Columbia Homeland Security and Emergency Management Agency 1015 Half Street, SE Washington, DC 20003
<b>Participating Regional Agencies</b>	DC Fire/Emergency Medical Services and DC Homeland Security and Emergency Management Agency
<b>Participating Metro Offices</b>	Metro Integrated Command and Communications Center, Metro Transit Police, Rail Services, Bus Services, Facilities Maintenance, Track & Structures, Power, Communications & Signaling, Customer Experience and Engagement, and Emergency Preparedness

**Full-Scale Exercise | Skills Station | Radio Antennae Deployment**

An operational (full-scale) exercise utilizes the same scenario and allow regional partners and Metro emergency responders to build off elements discussed during the February 28 tabletop exercise. This exercise will be conducted in two rotations allowing first responders a unique opportunity to implement protocols for a rapid response to an incident including response coordination, communication and victim rescue. Additionally, All first responders will participate in a fan shaft skills station to learn about and practice tunnel fan operation and safety protocols. Also present at the fan shaft will be members of the District’s radio cache who will lower a Bi-Directional Amplifier into the shaft to practice boosting the fire radio signal during a tunnel event.

<b>Date &amp; Time</b>	Sunday, April 28 from 08:00 AM – 11:00 AM
<b>Location</b>	Benning Road Metrorail Station 4500 Central Avenue SE, Washington, DC 20019
<b>Participating Regional Agencies</b>	DC Fire/EMS
<b>Participating Metro Offices</b>	Metro Integrated Command and Communications Center, Metro Transit Police, Rail Services and Emergency Preparedness
<b>Metro Support</b>	Facilities Maintenance, Track & Structures, Power, Communications & Signaling, Car Maintenance and Bus Services

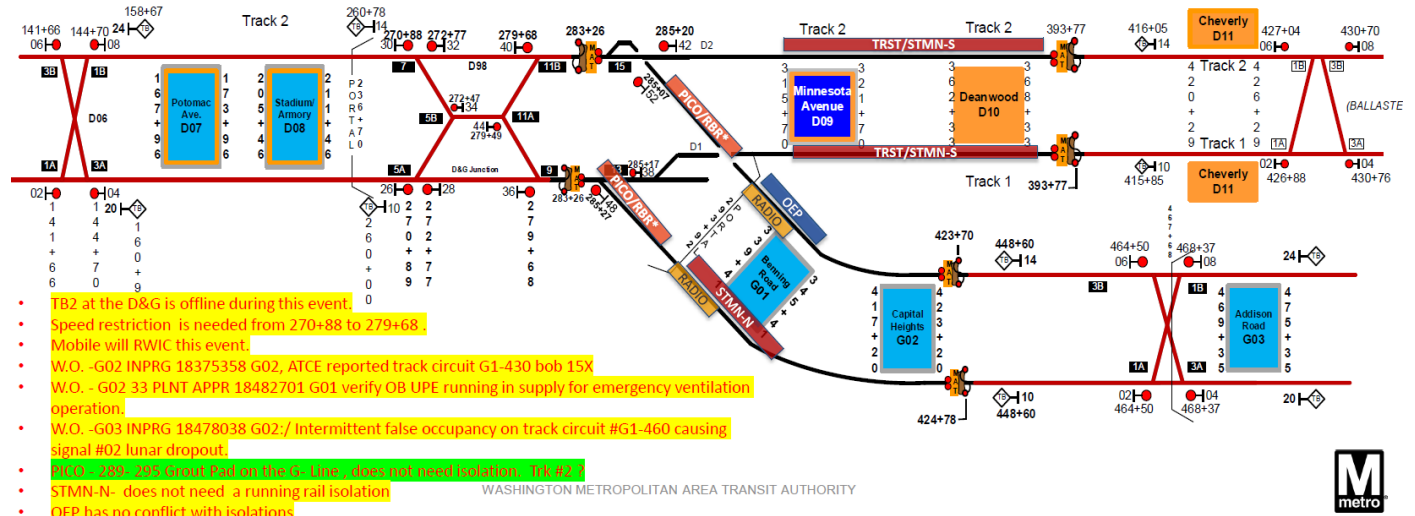


WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Attachment 4: Regional Exercise Program

# Appendix F – RSA24-210.33: D98-D11/G03

RSA24-210.33: D98-D11/G03										Wknd 4		Weekend Shutdown (Sat only), 1:00, Apr. 27-28	
Power Condition	GOTRS RSA #	Sponsor's Track Rights	PB Track Rights	TCP	Total Isolation	SPDR (T.C., SOW, W.O. All)	CTEM	Open Work Order (Yes, No)	PICO/RBIR *	G1/2-(284+40 to 296+00)	Aerial Structure Repair Project		
									COSI/RADIO	G1/2-(294+00 to 306+00)	Installation Micro Duct		
RT/LOTO	G242141801	RID-202408602600	3/30/2024	No	Yes	SOW	Yes	Yes	TRST/STMN-N	G1-(293+92 to 350+51)	Spot Grout Pad Repairs and Spot Leak Repairs		
									TRST/STMN-S	D1/2-(315+70 to 373+73)	Vegetation Removal		
									OEP	G2-(325+00 to 345+00)	OEP Full Scale Exercise		

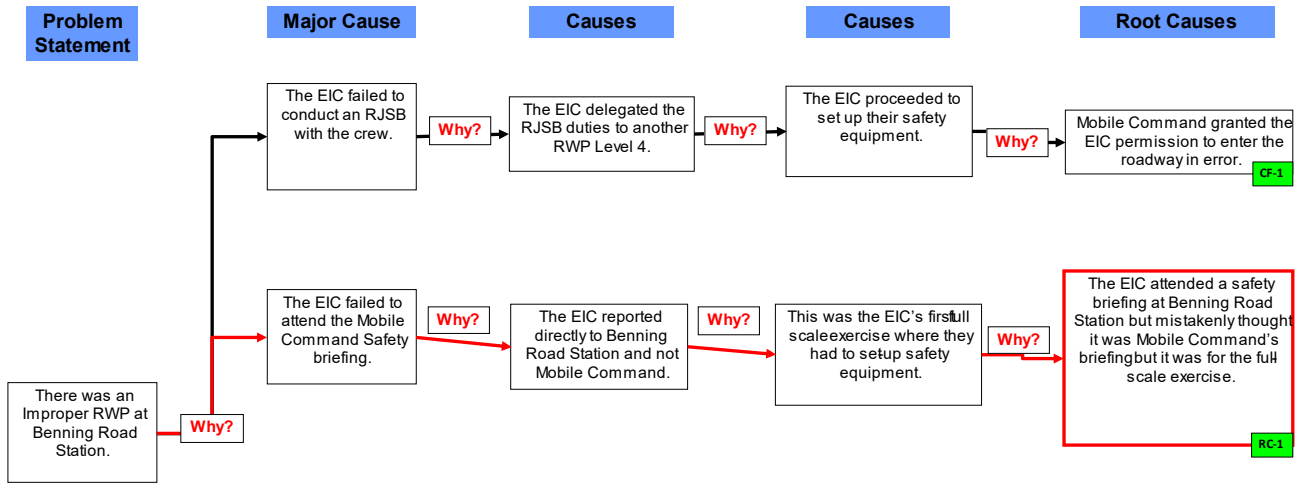


Attachment 5: Image of the various work zones during the weekend shutdown.

Incident Date: 04/27/2024 Time: 07:19 hours  
 Final Report – Improper RWP Rev. 1  
 E24400

Drafted By: SAFE 703 - 06/25/2024  
 Reviewed By: SAFE 707 – 06/27/2024  
 Approved By: SAFE 707 – 06/27/2024

## Appendix G – Why Tree



## Root Cause Analysis

