



*August 31, 2020*



**Service Delivery**



**Internal Safety Review**

# QICO 2020

## FYQ4 REVIEWS

Washington Metropolitan Area Transit Authority  
WMATA

- 5. Office of Bus Transportation (BTRA)**
- 6. Department of Bus Transportation Training & Administration (BTRN)**
- 7. Department of Rail Planning & Scheduling (RPLN)**

- 8. Department of Rail Planning & Scheduling (RPLN)**
- 9. Department of Low Voltage Electrical Maintenance (LVEM)**



# TABLE OF CONTENTS

<b>FYQ4 COMPREHENSIVE INTERNAL QUALITY &amp; SAFETY REVIEW SUMMARY</b>	<b>3</b>
<b>5. Office of Bus Operations (BTRA) Internal Review</b>	<b>4</b>
5.1. FUNCTIONAL OVERVIEW AND STRUCTURE	<b>6</b>
5.2. REVIEW SCOPE	<b>8</b>
5.3. AREAS FOR IMPROVEMENT	<b>10</b>
5.4. SUMMARY OF REQUIRED ACTIONS	<b>16</b>
<b>6. Department of Bus Transportation Training &amp; Administration (BTRA) Internal Review</b>	<b>18</b>
6.1. FUNCTIONAL OVERVIEW AND STRUCTURE	<b>20</b>
6.2. REVIEW SCOPE	<b>22</b>
6.3. AREAS FOR IMPROVEMENT	<b>23</b>
6.4. SUMMARY OF REQUIRED ACTIONS	<b>28</b>
<b>7. Department of Rail Planning &amp; Scheduling (RPLN) Internal Review</b>	<b>29</b>
7.1. FUNCTIONAL OVERVIEW AND STRUCTURE	<b>31</b>
7.2. REVIEW SCOPE	<b>33</b>
7.3. WHAT WORKED WELL	<b>34</b>
7.4. AREAS FOR IMPROVEMENT	<b>35</b>
7.5. SUMMARY OF REQUIRED ACTIONS	<b>38</b>
<b>8. Department of Rail Planning &amp; Scheduling (RPLN) Internal Safety Review</b>	<b>39</b>
8.1. FUNCTIONAL OVERVIEW AND STRUCTURE	<b>42</b>
8.2. REVIEW SCOPE	<b>43</b>
8.3. WHAT WORKED WELL	<b>44</b>
8.4. AREAS FOR IMPROVEMENT	<b>45</b>
8.5. SUMMARY OF REQUIRED ACTIONS	<b>46</b>
<b>9. Department of Low Voltage Electrical Maintenance (LVEM) Internal Safety Review</b>	<b>47</b>
9.1. FUNCTIONAL OVERVIEW AND STRUCTURE	<b>49</b>
9.2. REVIEW SCOPE	<b>51</b>
9.3. AREAS FOR IMPROVEMENT	<b>52</b>
9.4. SUMMARY OF REQUIRED ACTIONS	<b>56</b>
<b>INTERNAL CORRECTIVE AND PREVENTIVE ACTIONS (iCAPAS)</b>	<b>57</b>
Bus Operations iCAPAs	<b>58</b>
Bus Training & Administration iCAPAs	<b>83</b>
Rail Planning & Scheduling iCAPAs	<b>101</b>
Low Voltage Electrical Maintenance iCAPAs	<b>109</b>
<b>SUPPLEMENTAL MATERIALS</b>	<b>120</b>
APPENDIX A: INTERNAL REVIEW QUALITY MEASURES	<b>121</b>
APPENDIX B: SAFETY REVIEW SYSTEM SAFETY MEASURES	<b>122</b>
APPENDIX C: RISK ASSESSMENT	<b>123</b>
APPENDIX D: TECHNICAL TERMINOLOGY	<b>125</b>

## WHAT WE DO



### What is QICO?

The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. QICO and the internal review process are authorized by the General Manager as outlined in the [Quality Management System Plan \(QMSP\)](#).

### Why QICO Performed These Reviews?

These internal reviews are intended to provide Metro senior management with an assessment of the following areas:

- Bus Operations
- Bus Transportation Training & Administration
- Rail Planning & Scheduling
- Rail Planning & Scheduling (ISR)
- Department of Low Voltage Electrical Maintenance

### QICO's Methodology:

- Develop relevant review activities by identifying and assessing any risks to align with the QMSP 15 Core Standards.
- Compliance with the WMATA System Safety Program Plan (SSPP) is assessed through internal safety reviews.
- Review documentation, observe processes, and interview key personnel.
- Findings and required actions are based on risk rating, which ranges on a scale from "Insignificant" to "High".

**Note:** An itemized internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measurable resolution of identified concerns. To check the status of iCAPA implementation go to: [wmata.com/initiatives/transparency/](http://wmata.com/initiatives/transparency/).



Service Delivery



Internal Safety Review

## WHAT WE FOUND | Q4FY20 INTERNAL QUALITY & SAFETY REVIEWS

August 2020

### 5. Bus Operations

#### Action Areas Identified During Review:

- Measuring the impact of fatigue on incidents and accidents will increase employee and customer safety and reduce impact on service delivery.
- A closed loop customer feedback process will drive improvements in Metrobus customer service.
- Onboard telemetry systems must be fully operational on each Metrobus to provide supporting data for customer smartphone applications, first responders, and effective Bus Operations Communication Center monitoring.
- Establishment of a formal operations quality control plan is essential to monitor and improve BTRA activities.
- A process governing creation, closure, and quality of incident/accident reports will increase accountability.
- A commercial driver's license verification process guarantees all Metrobus operators are properly licensed.
- Tracing Maximo incidents to completion ensures proper handling and accountability.

### 6. Bus Transportation Training and Administration

#### Action Areas Identified During Review:

- Development of documented departmental procedures is necessary for consistent and controlled training processes.
- Accurate tracking of bus operator refresher training data will promote compliance with training requirements.
- Addressing the root cause of infractions is an effective approach to remedial training.
- Current and controlled policies, procedures, and standards provide clear direction and result in more consistent processes.
- Establishment of a formal quality control plan is essential for monitoring and improving BTRN activities.
- Current and controlled training materials are essential for consistent training processes.

### 7. Rail Planning & Scheduling

#### Wins:

- ✓ Potential schedule conflicts are identified and corrected prior to release of schedule to the operations group.
- ✓ RPLN scheduling continues to process schedule adjustments, now remotely, since the onset of the COVID-19 crisis.

#### Action Areas Identified During Review:

- Development of documented departmental procedures is necessary for consistent and controlled processes.
- Establishment of a formal quality control plan is essential for monitoring and improving RPLN activities.
- Current and controlled departmental documents are essential for consistent processes.
- A documented training matrix for all job positions provides assurance that all personnel are adequately qualified to perform their assigned work.
- Secure document retention is an essential part of overall document control.

### 8. Rail Planning & Scheduling

#### Wins:

- ✓ Potential schedule conflicts (hazards) are identified and corrected prior to release of schedules to the operations group.
- ✓ Creation of emergency scenarios and mock-ups can be further developed into playbooks for use in an actual emergency situation.

#### Action Areas Identified During Review:

- Development of documented departmental procedures is necessary for consistent safety oversight within all processes.
- A documented training matrix, including required departmental safety training, is essential for personnel to incorporate safe practices within their assigned work.

### 9. Department of Low Voltage Electrical Maintenance

#### Action Areas Identified During Review:

- Complying with required Personal Protective Equipment (PPE) reduces risks associated with occupational tasks.
- Conducting required Job Safety Briefings enhances compliance with safety requirements, improves controls for risks, and incorporates utilization of hazard identification and mitigation.
- Utilization of documented Preventative Maintenance Instructions (PMI) before and during the performance of the PMIs promotes preparation and ensures the use of approved and pertinent equipment and tools.
- Reviewing and updating documented PMIs in accordance with the required periodicity promotes efficiency and safety.
- Establishing a documented process for the entire Maximo Work Order lifecycle promotes traceability and accountability.
- Adherence to WMATA and OSHA training requirements promotes compliance and minimizes risks associated with workplace hazards.
- Complying with the SMNT MCP Quality Control program promotes a culture of safety and the effective implementation of rules and procedures.

## WHAT WMATA WILL DO MOVING FORWARD

### Key Takeaways

5. A comprehensive quality control plan is essential to monitor and improve BTRA operations.
  - Develop a Quality Control Plan (QCP) to monitor established processes and promote continuous improvement.
  - For details on committed actions, see the following iCAPAs: QICO-BTRA-20-01, QICO-BTRA-20-02, QICO-BTRA-20-03, QICO-BTRA-20-04, QICO-BTRA-20-05, QICO-BTRA-20-06, and QICO-BTRA-20-07.
6. The establishment of departmental processes and procedures will promote training compliance, consistency, and curriculum development.
  - Identify all core BTRN functions and develop associated processes and procedures.
  - For details on committed actions, see the following iCAPAs: QICO-BTRN-20-01, QICO-BTRN-20-02, QICO-BTRN-20-03, QICO-BTRN-20-04, QICO-BTRN-20-05.
7. The establishment of departmental processes and procedures will promote compliance and consistency throughout all levels of the department.
  - Develop a process or procedure for each of RPLN's core functions.
  - For details on committed actions, see the following iCAPAs: QICO-RPLN-20-01 and QICO-RPLN-20-02.

### Key Takeaways

8. The establishment of departmental processes and procedures will promote compliance and consistency throughout all levels of the department.
  - Develop a process or procedure for each of RPLN's core functions.
  - For details on committed actions, see the following iCAPAs: QICO-RPLN-20-01 and QICO-RPLN-20-02.
9. Implementation of safety policies and procedures as well as documenting processes institute a safety culture and promote a safe working environment.
  - Management oversight plan must reinforce the frequency and accuracy of compliance checks for job safety briefings and confirm that appropriate PPE, tools, and equipment are in place at the job site.
  - For details on committed actions, see the following iCAPAs: QICO-LVEM-20-01, QICO-LVEM-20-02, and QICO-LVEM-20-03.



Washington Metropolitan Area Transit Authority

## INTERNAL REVIEW 2020

### Internal Review: **Service Delivery** **(5) Bus Operations**

June 11, 2020



Quality Assurance, Internal Compliance & Oversight (QICO)

*Promoting Transparency, Accountability, & Public Confidence*



ENGINEERING &  
MAINTENANCE



SERVICE  
DELIVERY



CAPITAL PROGRAM –  
MANAGEMENT  
& EXECUTION



INTERNAL SAFETY  
REVIEW



**What is QICO?**

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. QICO and the internal review process are authorized by the General Manager as outlined in the [Quality Management System Plan \(QMSP\)](#).

**Why QICO Performed This Review:**

- This internal review is intended to provide Metro senior management with an assessment of the state of Bus Operations processes and promote the actions needed to address any concerns.

**QICO’s Methodology:**

- Develop relevant review activities by identifying and assessing any risks to align with the QMSP 15 Core Standards.
- Review documentation, observe processes, and interview key personnel.
- Findings and required actions are based on risk rating, which ranges on a scale from “Insignificant” to “High”.

**INTERNAL REVIEW SUMMARY**

May 2020

**(5) Bus Operations Internal Review**



**Key Takeaway:**

*A comprehensive quality control plan is essential to monitor and improve BTRA operations.*

**Areas for Improvement:**

- Measuring the impact of fatigue on incidents and accidents will increase employee and customer safety and reduce impact on service delivery.
- A closed loop customer feedback process will drive improvements in Metrobus customer service.
- Onboard telemetry systems must be fully operational on each Metrobus to provide supporting data for customer smartphone applications, first responders, and effective Bus Operations Communication Center monitoring.
- Establishment of a formal operations quality control plan is essential to monitor and improve BTRA activities.
- A process governing creation, closure, and quality of incident/accident reports will increase accountability.
- A commercial driver’s license verification process guarantees all Metrobus operators are properly licensed.
- Tracing Maximo incidents to completion ensures proper handling and accountability.

**Required Actions:**

- **QICO-BTRA-20-01:** Implement controls to monitor and mitigate the impact of operator fatigue.
- **QICO-BTRA-20-02:** Develop a comprehensive log-on process that includes criteria for supervisors and specialists, as well as data analysis and action plans.
- **QICO-BTRA-20-03:** Create and execute a documented process to implement feedback resulting from customer complaints into Metrobus operations and training.
- **QICO-BTRA-20-04:** Develop a Quality Control Plan (QCP) to monitor established processes and promote continuous improvement.
- **QICO-BTRA-20-05:** Create and implement a procedure that details incident/accident data entry requirements and review process.
- **QICO-BTRA-20-06:** Create and implement a CDL verification process that includes detailed procedures and audit plans.
- **QICO-BTRA-20-07:** Develop and document a Maximo incident process that governs creation, modification, and closure of all incidents.

**Note:** An itemized internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measurable resolution of identified concerns. To check the status of iCAPA implementation go to <https://www.wmata.com/initiatives/transparency>

## 5.1. FUNCTIONAL OVERVIEW AND STRUCTURE

### Bus Operations

WMATA's Metrobus services over 10,000 bus stops in the District of Columbia, Maryland, and Virginia, facilitated by a fleet of over 1,500 buses integrated with six Metrorail lines. Over 2,500 Metrobus operators, supervisors and control room personnel maintain 24-hour coordination of this service. In CY 2019, Metrobus provided 104 million trips with an average weekday ridership of 350,000.

Metrobus Operations are administered, coordinated, and carried out through multiple critical functions including the following:

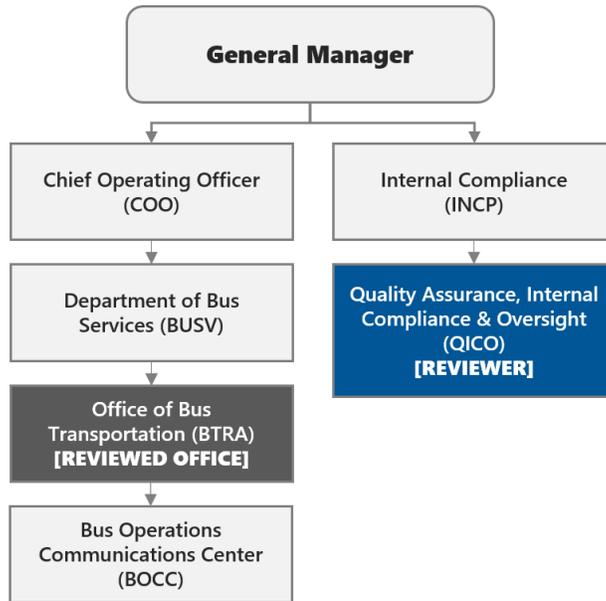
- Metrobus Operators play a vital role in providing public bus transit to the Greater Washington Metropolitan Area. As professional commercial drivers, they are responsible for safe and timely transit bus operation. As a daily challenge, Metrobus operators must be able to adjust their regular route instantaneously while adapting to traffic conditions, unscheduled road closures, weather events, and other unplanned events. Additionally, Metrobus operators provide critical bus bridge service in the event of a Metrorail disruption.
- Transit Field Supervisors (TFSS) monitor and support bus operators by maintaining schedule headway, ensuring operator compliance with rules and regulations, responding to and documenting accidents and incidents, conducting operator evaluations, and coordinating with the Bus Operations Control Center (BOCC), amongst other duties.
- BOCC Specialists monitor, direct and manage the day-to-day operation of bus service from the communications center via radio, phone and computer. They can observe all Bus Transportation (BTRA) operations remotely through on-board telemetry systems and maintain constant contact between operators, TFSS, and division personnel.
- At the bus divisions, depot clerks, office managers, assistant superintendents, and superintendents are responsible for all administrative aspects of the Metrobus operations, primarily management of Metrobus operators.

This review will focus on adherence to existing BTRA policies, procedures, and processes. For the BTRA Internal Review, QICO has identified 11 applicable quality measures from Metro's [Quality Management System Plan \(QMSP\)](#). These are based on the [15 Core QMSP Standards](#), detailed on the final page of this document.

1. Management Responsibility
2. Documented Quality Management System
4. Document Control
6. Identification & Traceability of Assets & Material
7. Process Control
8. Inspection, Testing & Status
10. Non-Conformance
11. Corrective & Preventative Actions
12. Quality Records
14. Training
15. Customer Focus

## Organizational Structure and Background

Within WMATA, Metrobus operators and division personnel report to the office of Bus Transportation (BTRA). While under the office of BTRA, TFSs report to the BOCC, supporting bus operations while remaining independent of division operations. As shown in the organizational chart, QICO is independent of these functions, reporting to the General Manager through Internal Compliance (INCP). The scope of this internal review is to assess areas for improvement within Metrobus operations. While BOCC Transit Field Supervisor processes were assessed as part of this review, the control center was not directly assessed as this was completed in the [2019 BOCC Internal Review](#).



## 5.2. REVIEW SCOPE

### Documentation Review

- Standard Operating Procedure (SOP) 1.1 Pre-Trip Inspections Rev 3, July 14, 2017
- SOP 1.2 Mirror Adjustment Procedures Rev 3, July 14, 2017
- SOP 1.3 Observations Rev 3, July 14, 2017
- SOP 1.4 Starting and Stopping Rev 3, July 14, 2017
- SOP 1.5 Following Moving Traffic Rev3, July 14, 2017
- SOP 1.6 Changing Lanes, Passing, and Being Passed Rev 3, July 14, 2017
- SOP 1.7 Intersection Operating Procedures Rev 3, July 14, 2017
- SOP 1.8 Left Turns Procedures Rev 3, July 14, 2017
- SOP 1.9 Right Turns Procedures Rev 3, July 14, 2017
- SOP 1.10 Service Stops Rev 3, July 14, 2017
- SOP 1.11 School Bus Zones Rev 3, July 14, 2017
- SOP 1.12 Railroad Crossings Rev 3, July 14, 2017
- SOP 1.13 Metrorail Station Operations Rev 3, July 14, 2017
- SOP 1.14 Driving on Expressways Rev 3, July 14, 2017
- SOP 1.15 Defensive Driving Procedures Rev 3, July 14, 2017
- SOP 1.16 Adverse Driving Conditions Rev 3, July 14, 2017
- SOP 1.17 Backing and Parking Procedures Rev 3, July 14, 2017
- SOP 1.18 Securing a Bus Rev 3, July 14, 2017
- SOP 1.19 Articulated Bus Operation Rev 3, July 14, 2017
- SOP 1.20 Alternative Fuel Buses Rev 3, July 14, 2017
- SOP 1.21 Senior Citizens and Customers with Disabilities Rev 3, July 14, 2017
- SOP 1.22 Farebox Collections Rev 3, July 14, 2017
- SOP 1.23 Bus Communication System Procedures Rev 3, July 14, 2017
- SOP 1.24 Emergency Procedures Rev 3, July 18, 2017
- SOP 1.25 Sharing the Road with Bicyclists Rev 3, July 14, 2017
- SOP 1.26 Post-Trip Inspections Rev 3, July 14, 2017
- SOP 1.27 Command, Control, and Coordination of Emergencies on the Bus System Rev 3, July 14, 2017
- SOP 1.0 Standard Operating Procedures Rev 0, undated
- SOP 2.0 Petty Cash Procedure Rev "February 6, 2015", February 6, 2015
- SOP 5.0 Mandatory Medical Examination Rev 1, June 2, 2014
- SOP 3.0 Discipline and Dismissal Rev (blank), January 26, 2015
- SOP 4.0 Employment Assistance Program Rev 1, December 2014
- SOP 1.0 Bereavement Leave, Military Leave, Jury Duty Leave Rev "December 2014", December 2014
- SOP 1.0 Accident and Incident Investigation Management and Process Rev "August 2014", August 2014
- Memorandum A Guide to Determining Preventable Accidents, July 2, 2014
- BTRA-BTRA-PRO01-11 Detour Procedures by Department Rev 0, November 12, 2019
- BTRA-ADMN-WRK01-00 BTRA Document Naming Convention Rev 0, November 8, 2019
- Bus Operations Communication Manual
- Street Operations Manual (2019)
- BUSV Employee Handbook (May 2017)
- BTRA Division Manual (2017)
- Federal Transit Administration (FTA) CAP B-2-2-a
- FTA CAP B-3-4-a

- FTA CAP B-3-5-a
- QICO- American Public Transportation Association (APTA)-CAP-19-02
- QICO-APTA-CAP-17-02
- Office of Transit Performance Management (PERF) Metrobus Data Quality Agenda, March 2, 2020
- BUSV P3.0 Document Control Policy
- Metro Fatigue Risk Management Policy 10.6 (2013)
- Metro Hours of Service Policy 10.7 (2015)
- BTRA Hours of Service Compliance Report, September 2019
- Notice to Operators (NTOs)
  - o #19-26 Securing the Bus
  - o #19-14 Proper Logon/Logoff Procedures
  - o #07-03 Mandatory LOG-ON / LOG-OFF Requirements
  - o #11-22 Regulation Metrobus Uniform Winter Attire
  - o #19-23 Regulation Metrobus Uniform Winter Attire
  - o #19-21 Revised Program Work Partners
  - o #18-35 New Program Work Partners
  - o #17-18 Six Steps to Safe Bus Securement Reissue
  - o #19-13 Practicing Safety Observations to Avoid Contact with Pedestrians
  - o #20-01 Practicing Safety Observations to Avoid Contact with Pedestrians
  - o #20-20 Metro Open Stroller Pilot Program
  - o #19-27 Go NATS Destination Sign Change
  - o #19-29 Go NATS Destination Sign Change
- Incident Reports
  - o 20200121#85848
  - o 20200129#86044
  - o 20200210#86268
  - o 20200213#86374
  - o 20200218#86495
  - o 20200216#86456
  - o 20200216#86458
  - o 20200220#86558
  - o 20200220#86560
  - o 20200224#86610

**Personnel Discussions**

- Three (3) BTRA Service Directors
- Four (4) BTRA Transit Field Supervisors
- Customer Service (CSVC) Director
- CSVC Supervisor
- SAFE FRMS (Fatigue Risk Management System) Manager
- Two (2) BTRA Bus Division Office Managers
- Two (2) BTRA Bus Division Depot Clerks
- BTRA Street Operations Superintendent (acting)

### 5.3. AREAS FOR IMPROVEMENT

Findings are categorized by the [15 Core QMS Standards](#) and rated by the [Risk Assessment](#)

FQ-BTRA-20-01 Process Control

Safety - High (IMP 5, PROB 4) ■ Owner – BTRA

- **Measuring the impact of fatigue on incidents and accidents will increase employee and customer safety and reduce impact on service delivery.**

#### Discussion

- BTRA does not have a documented process for recording and analyzing Fatigue Risk Management (FRM) data, fatigue data collected post incident, or analyzing hours worked leading up to the incident.
- Per Metro’s Hours of Service Policy 10.7/1 (2015), no employee may be on duty more than 12 hours, consecutively or aggregately, in any given duty tour. For employees who have period(s) of interim release, the duty tour must not exceed 14 hours. Additionally, a period of 10 hours must elapse between shifts. (Section 5.00 Policies and Procedures).
- The latest FRM made available was the September 2019 BTRA Hours of Service Compliance Report. 10,626 violations are documented that month as follows:
  - o Exceeding Workday Duration: 968
  - o Exceeding Shift Service: 4168
  - o Exceeding Release Period: 3719
  - o Exceeding Consecutive Days: 1771
- QICO reviewed a sampling of incident/accident reports and observed missing or incomplete fatigue information on the following reports: 20200121#85848, 20200129#86044, 20200210#86268, 20200213#86374 and 20200218#86495. Three of the five incidents lacked required information on operator’s sleep history leading up to the incident.
- On November 6, 2019, the Washington Metrorail Safety Commission re-issued the FTA’s finding regarding an effective hours of service policy. These CAPs were reissued as WMSC-19-C0008a/b directing Metro to implement a revised hours of service policy.
- Bus operator fatigue analysis will allow BTRA and Bus Planning & Scheduling (BPLN) to determine corrective actions and planning based on objective data.
- Schedules are based on the budgeted number of positions rather than the number of filled positions.

**FQ-BTRA-20-02 Process Control****Service Delivery - Elevated (IMP 4, PROB 4) ■ Owner – BTRA**

- **Onboard telemetry systems must be fully operational on each Metrobus to provide supporting data for customer smartphone applications, first responders, and effective Bus Operations Communication Center monitoring.**

**Discussion**

- Metrobus operators are required to log-on to the bus's telemetry system (CleverDevice) prior to entering revenue service.
- Through interviews and document requests, QICO assessors found that no formal plan for reporting, correcting, and tracking Metrobus log-on compliance exists within BUSV.
- Operating a Metrobus while not logged on to CleverDevice leads to several consequences including:
  - o Increased safety risk due to inaccurate location data and inoperative radio systems.
  - o Negative impact on customer experience due to lack of real-time arrival data, blank destination signs, disabled automatic onboard visual and audio announcements, and electronic bus stop signage, with a disproportionate impact on ADA customers.
  - o Operational inefficiency as Bus Operations Communication Center (BOCC) personnel attempt to identify logged off operators/assets and manage headway.
  - o Inaccurate ridership data collection, as the automatic passenger counter (APC) system will not function correctly while logged off. This data is utilized for official ridership reporting to the public, Metro's Board of Directors, and FTA to drive operational and fiscal decision making.
  - o Key operational data such as stop and timepoint arrival and departure times is not collected while logged off. This data is used to monitor on-time performance and develop bus schedules.
- Metro's Office of Transit Performance Management (PERF) provided QICO with the March 2, 2020 Metrobus Data Quality Agenda. January 2020 data shows that 64% of scheduled log-on events are completed on-time (<10 minutes after scheduled pullout time).
- Per PERF's January analysis of Clever reports data, 17% of log-ons were late and 18% were classified as missed. It is not clear whether missed log-ons are service not delivered or delivered while not logged-on (additional analysis of missed logins is pending by PERF and the Office of Planning (PLAN)).
- Once in revenue service, PERF's January 2020 data shows that 49% of log-on events were intermittent (more than one log-on).
- While log-on performance figures are no longer reported thru BusStat due to the large number of intermittent log-on events impacting the results, new log-on indicators are currently under development as part of PERF and PLAN's work to enhance log-on data analysis.
- BTRA TFS personnel conduct log-on compliance checks in the field, but no governing process exists as noted in QICO-BTRA-20-04: Establishment of a formal operations quality control plan is essential to monitor and improve BTRA activities.
- Operators are required to verify proper operation of onboard communication equipment and log-on prior to entering revenue service.
- SOP 1.1 Pre-Trip Inspection provides instructions for operators to log-on prior to starting their work. This procedure was last reviewed July 2017 and was scheduled to be reviewed again July 2019, therefore is past due for review. The procedure for logging-on has changed as noted in Notice to Operators (NTO) #19-14 which requires the procedure to be revised.
- NTO #19-14 outlines the steps and importance of properly logging onto a Metrobus, while NTO #09-33 details progressive disciplinary action for bus operator non-compliance.

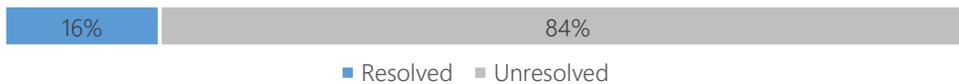
**FQ-BTRA-20-03 Customer Focus** **Service Delivery - Elevated (IMP 3, PROB 5)** ■ **Owner – BTRA**

- **A closed loop customer feedback process will drive improvements in Metrobus customer service.**

**Discussion**

- The office of Customer Service (CSVC) processes customer feedback submitted through phone, email, chat, web and social media. These complaints are then categorized and distributed to the respective divisions for processing. Through document requests and discussions, assessors found that BTRA currently does not have a closed loop customer feedback process.
- QICO performed an assessment of all CSVC customer complaints (requiring division research and/or follow-up) generated between 11/01/2019 and 02/04/20. Of the 2,455 cases reviewed, there was evidence of follow-up and resolution of 343 (16%) cases as shown in figure 1.

Figure 1: Total Division CRM Cases 11/01/19 - 02/04/20



- While the 2017 Bus Transportation Division Manual section 8.4 outlines basic navigation of Customer Relationship Management application (CRM), it does not include roles and responsibilities, timeframes for responding to cases, review process, or details on updating cases with research which is in turn utilized by CSVC to contact the customer.
- No process was provided for utilizing CSVC data to drive improvements within bus operations and training.

**FQ-BTRA-20-04 Process Control** **Service Delivery - Moderate (IMP 2, PROB 5)** ■ **Owner – BTRA**  
**Corrective & Preventive Action**

- **Establishment of a formal operations quality control plan is essential to monitor and improve BTRA activities.**

**Discussion**

- Through discussions with key personnel and document reviews, QICO found that BTRA does not employ a formalized and documented operations quality control plan to monitor operations and take appropriate corrective actions.
- BTRA conducts various quality control activities such as annual operator evaluations and other supervisor field activities. These activities, however, are not governed by an overarching plan that details the types of checks, how to conduct them, their frequency, the associated forms and templates, and required corrective actions.
- A quality control plan would allow BTRA to monitor operator compliance, better direct training, and reveal opportunities for improvement for both internal customers at Metro as well as the riding public.
- BTRA currently generates data through the following TFS assessments:
  - o Annual Evaluations: Data was available for January 1, 2020 thru April 6, 2020 and indicated that all operators achieved a 100% satisfactory rating.
  - o Mystery Rider: Mystery rider (plainclothes) evaluation data was available for September 2019, with a 59% satisfactory rate across the 94 operators assessed. The mystery rider program follows a similar checklist utilized for the annual operator evaluation but is not governed by a documented process.
- TFSs currently complete most activities on paper. As example of an equivalent internal practice, counterparts in Metrorail record their daily activities and the results of checks electronically, submitted via Metro issued smartphones (Rail Supervisor Daily Activities Report (RSDAR)). This results in immediate collection of data, allowing for fast, efficient, and accurate transmission and analysis of operator reports. Metrorail then utilizes this data to drive improvements through daily monitoring and monthly staff meetings.

FQ-BTRA-20-05 Process Control

Safety - Moderate (IMP 2, PROB 5)

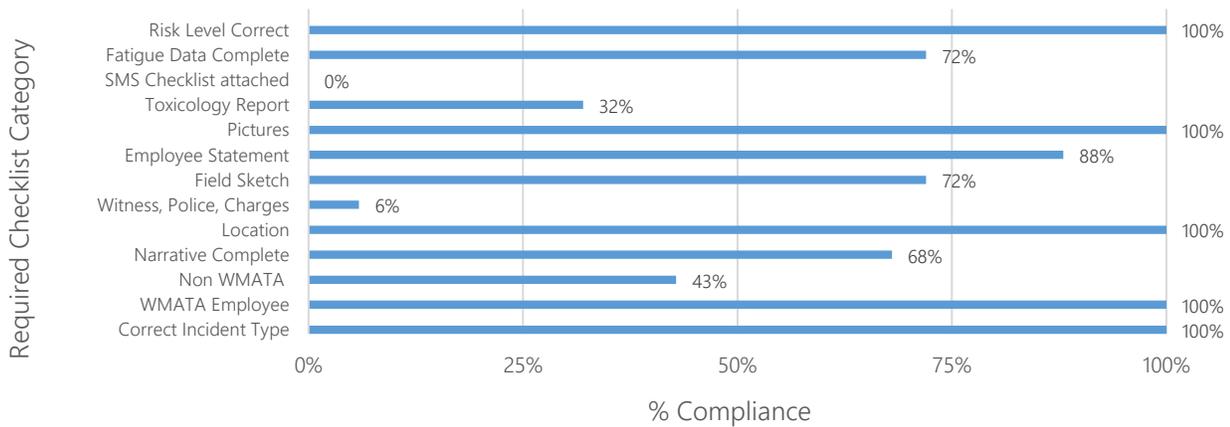
Owner – BTRA/BOCC

- A process governing creation, closure, and quality of incident/accident reports will increase accountability.

Discussion

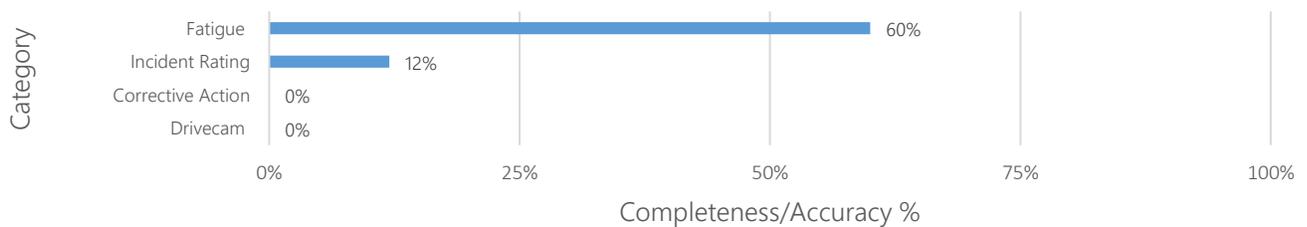
- When a bus incident/accident occurs a TFS is assigned to manage it by BOCC. The TFS is responsible for responding to the incident/accident, performing an initial investigation, and completing required documentation. BTRA’s Street Operations Manual outlines the required criteria to be included in incident/accident reports.
  - o BTRA does not have a quality control plan to monitor incident/accident report compliance.
  - o Utilizing the BTRA incident checklist, QICO reviewed a sampling of 25 incident/accident reports from January 1, 2020 through February 29, 2020 for completeness and found overall accuracy, a composite of the elements in the chart below, at 68%. Refer to figure 2 for results.

Figure 2: TFS Incident/Accident Compliance Assessment Results



- Division office managers are assigned to review incidents/accidents for operators at their division and must download all the information to be included in the operator’s employee file before closing the incident/accident. The Bus Transportation Division Manual does not cover the process or requirements for closing an incident/accident (section 6.1 Bus Accident Procedure).
- The same 25 incidents/accidents were reviewed for completeness and accuracy, averaging 18% as shown in figure 3.

Figure 3: Division Incident/Accident Data Quality Assessment



- o The fatigue category represents hours of sleep prior to the incident/accident. This is an important way to determine if operator fatigue was a contributing factor. 60% of the assessed samples were complete.
- o Incident rating identifies whether or not the accident was preventable, with 12% of samples completed.
- o The corrective action field notes any actions that were taken as a result of the incident/accident. None of the incidents/accidents reviewed had this completed.
- o When the bus corners or brakes abruptly, the DriveCam records the moments before and after, assigning an event number to the recording. QICO found this field left unfilled in all 25 incidents/accidents reviewed.
- The Bus Operator Record Management System (BORMS) is an electronic database for an operator’s individual employee files. Requirements for BORMS incident/accident data is outlined in the BTRA Division Manual.

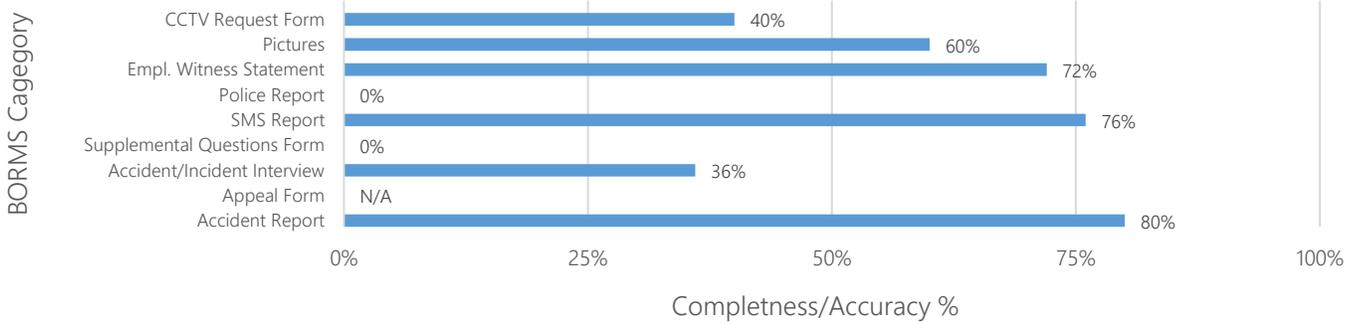
**FQ-BTRA-20-05 Process Control**

**Safety - Moderate (IMP 2, PROB 5)**

**Owner – BTRA/BOCC**

- Using the BTRA Division Manual as guidance, utilizing the same 25 samples from figures 2 and 3, QICO reviewed incidents/accidents for completeness and accuracy within BORMS. A detailed analysis can be seen in figure 4.

Figure 4: BORMS Incident/Accident Data Quality Assessment



- Development of an incident/accident documentation process encompassing TFS, office manager, and BORMS incident/accident handling will ensure accountability.

**FQ-BTRA-20-06 Process Control**

**Service Delivery - Moderate (IMP 4, PROB 2) ■ Owner – BTRA**

- **A commercial driver’s license verification process guarantees all Metrobus operators are properly licensed.**

**Discussion**

- All Metrobus operators are required to maintain a valid commercial driver’s license (CDL) which includes a bi-annual Department of Transportation (DOT) medical examination.
  - o To ensure safe and legal Metrobus operations, a formal process outlining CDL verification and regular compliance checks is needed.
- The process of ensuring CDL compliance used by BTRA is inclusive of:
  - o When an operator is hired, the BTRA contractor is responsible for adding the employee’s license information to the notification list for their respective state’s Department of Motor Vehicles (DMV)
  - o Notifications by each state’s DMV are sent when an operator’s license status has changed for reasons such as:
    - Address change
    - Moving Violations
    - License suspension/revocation
    - DOT Physical examination expiration
  - o After BTRA receives a notification of an operator’s license status change, the BTRA contractor must log into the state’s DMV website and retrieve the information on the status change
  - o BTRA is responsible for notifying BTRA management of the information for them to make the required corrective actions
  - o Additionally, BUSV procedures require operators to immediately self-report any changes to their license status to their supervisor or superintendent
  - o Failing to self-report changes can lead to termination
- Through document requests, BTRA provided an operator license monitoring process. This process outlines the navigation of state DMV websites but does not provide:
  - o The process of monitoring operator CDLs listed above
  - o A timeline of recurring audits
  - o Oversight of the BTRA contractor’s work
- A comprehensive process that includes roles, responsibilities, compliance tracking, and reporting is necessary to guarantee Metrobus operators are properly licensed.

**FQ-BTRA-20-07 Process Control**

**Service Delivery - Low (IMP 2, PROB 2) ■ Owner – ITSS/BTSS/BUSV**

- **Tracking Maximo incidents to completion ensures proper handling, traceability, and accountability.**

**Discussion**

- Upon processing an incident, BOCC generates an incident record within their computer aided dispatch system (CleverCAD) which generates an associated record within Metro’s asset management software, Maximo. Once these incidents are created, they are automatically assigned “in progress” status.
- QICO was unable to find a process governing incident closure and found that incident tickets are not routinely reviewed within Maximo to reflect the actual status.
- QICO assessed all Maximo incidents generated between 12/01/19 and 02/29/20. A total of 14,742 incidents were generated with 100% labeled “in progress”.
- With Maximo incident tickets not actively closed, this limits accountability, traceability, and transparency. For example, unaddressed maintenance related incidents are untraceable since all will be labeled “in progress” as opposed to being closed upon resolution.
- A closed loop process would allow BTRA to develop metrics and monitor performance.
- As an example of an equivalent internal practice, counterparts in the Rail Operations Control Center (ROCC) update and close Maximo incident tickets while maintenance related incident tickets are linked to maintenance work orders for closure.

## 5.4. SUMMARY OF REQUIRED ACTIONS

**QICO-BTRA-20-01** Action Owner – BTRA Overall Risk – High (Average Score) ■

**Required Action: Implement controls to monitor and mitigate the impact of operator fatigue.**

Applicable Findings

- **FQ-BTRA-20-01:** Measuring the impact of fatigue on incidents and accidents will increase employee and customer safety and reduce impact on service delivery.
  - o **Standard:** Process Control/Corrective & Preventive Action **Risk:** Safety – High (IMP 5, PROB 4)

**QICO-BTRA-20-02** Action Owner – BTRA Overall Risk – Elevated (Average Score) ■

**Required Action: Develop a comprehensive log-on process that includes criteria for supervisors and specialists, as well as data analysis and action plans.**

Applicable Findings

- **FQ-BTRA-20-02:** Onboard telemetry systems must be fully operational on each Metrobus to provide supporting data for customer smartphone applications, first responders, and effective Bus Operations Communication Center monitoring.
  - o **Standard:** Non-Conformance **Risk:** Service Delivery – Elevated (IMP 4, PROB 4)

**QICO-BTRA-20-03** Action Owner – BTRA Overall Risk – Elevated (Average Score) ■

**Required Action: Create and execute a documented process to implement feedback resulting from customer complaints into Metrobus operations and training.**

Applicable Findings

- **FQ-BTRA-20-03:** A closed loop customer feedback process will drive improvements in Metrobus customer service.
  - o **Standard:** Customer Focus **Risk:** Service Delivery – Elevated (IMP 3, PROB 5)

**QICO-BTRA-20-04** Action Owner – BTRA Overall Risk – Moderate (Average Score) ■

**Required Action: Develop a Quality Control Plan (QCP) to monitor established processes and promote continuous improvement.**

Applicable Findings

- **FQ-BTRA-20-04:** Establishment of a formal operations quality control plan is essential to monitor and improve BTRA activities.
  - o **Standard:** Documented Quality Management System **Risk:** Service Delivery – Moderate (IMP 2, PROB 5)

**QICO-BTRA-20-05** Action Owner – BTRA/BOCC Overall Risk – Moderate (Average Score) ■

**Required Action: Create and implement a procedure that details incident/accident data entry requirements and review process.**

Applicable Findings

- **FQ-BTRA-20-05:** A process governing creation, closure, and quality of incident/accident reports will increase accountability.
  - o **Standard:** Process Control **Risk:** Safety – Moderate (IMP 2, PROB 5)

**QICO-BTRA-20-06** Action Owner – BTRA

Overall Risk – Moderate (Average Score) ■

**Required Action: Create and implement a commercial driver’s license verification process that includes detailed procedures, audit plans, and reporting.**

**Applicable Findings**

- **FQ-BTRA-20-06:** A commercial driver’s license verification process guarantees all Metrobus operators are properly licensed.
  - o **Standard:** Process Control **Risk:** Safety – Moderate (IMP 2, PROB 5)

**QICO-BTRA-20-07** Action Owner – ITSS/BTSS/BUSV

Overall Risk – Low (Average Score) ■

**Required Action: Develop and document a Maximo incident process that governs creation, modification, and closure of all incidents.**

**Applicable Findings**

- **FQ-BTRA-20-07:** Tracing Maximo incidents to completion ensures proper handling and accountability.
  - o **Standard:** Process Control **Risk:** Service Delivery – Low (IMP 1, PROB 5)

[Internal Corrective and Preventive Actions \(iCAPAs\)](#) are designated to address each Required Action listed above.



Washington Metropolitan Area Transit Authority

## INTERNAL REVIEW 2020

### Internal Review: **Service Delivery** **(6) Bus Transportation Training & Administration (BTRN)**

June 11, 2020



Quality Assurance, Internal Compliance & Oversight (QICO)

*Promoting Transparency, Accountability, & Public Confidence*



ENGINEERING &  
MAINTENANCE



SERVICE  
DELIVERY



CAPITAL PROGRAM –  
MANAGEMENT  
& EXECUTION



INTERNAL SAFETY  
REVIEW



### What is QICO?

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. QICO and the internal review process are authorized by the General Manager as outlined in the [Quality Management System Plan \(QMSP\)](#).

### Why QICO Performed This Review:

- This internal review is intended to provide Metro senior management with an assessment of the state of Bus Transportation Training & Administration processes and promote the actions needed to address any concerns.

### QICO's Methodology:

- Develop relevant review activities by identifying and assessing any risks to align with the QMSP 15 Core Standards.
- Review documentation, observe processes, and interview key personnel.
- Findings and required actions are based on risk rating, which ranges on a scale from "Insignificant" to "High".

## INTERNAL REVIEW SUMMARY

June 2020

### (6) Bus Transportation Training & Administration (BTRN)



#### **Key Takeaway:**

*The establishment of departmental processes and procedures will promote training compliance, consistency, and curriculum development.*

#### **Areas for Improvement:**

- Development of documented departmental procedures is necessary for consistent and controlled training processes.
- Accurate tracking of bus operator refresher training data will promote compliance with training requirements.
- Addressing the root cause of infractions is an effective approach to remedial training.
- Current and controlled policies, procedures, and standards provide clear direction and result in more consistent processes.
- Establishment of a formal quality control plan is essential for monitoring and improving BTRN activities.
- Current and controlled training materials are essential for consistent training processes.

#### **Required Actions:**

- **QICO-BTRN-20-01:** Identify all core BTRN functions and develop associated processes and procedures.
- **QICO-BTRN-20-02:** Establish a process for monitoring, maintaining, and reporting operator training compliance.
- **QICO-BTRN-20-03:** Revise the remedial training program to target the root cause of operator infractions.
- **QICO-BTRN-20-04:** Adhere to BUSV's existing document control policy and remove or revise outdated and superseded documents.
- **QICO-BTRN-20-05:** Develop and implement a documented Quality Control Plan (QCP) to promote consistent department performance.

**Note:** An itemized internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measurable resolution of identified concerns. To check the status of iCAPA implementation go to <https://www.wmata.com/initiatives/transparency>

## 6.1. FUNCTIONAL OVERVIEW AND STRUCTURE

### Bus Transportation Training & Administration

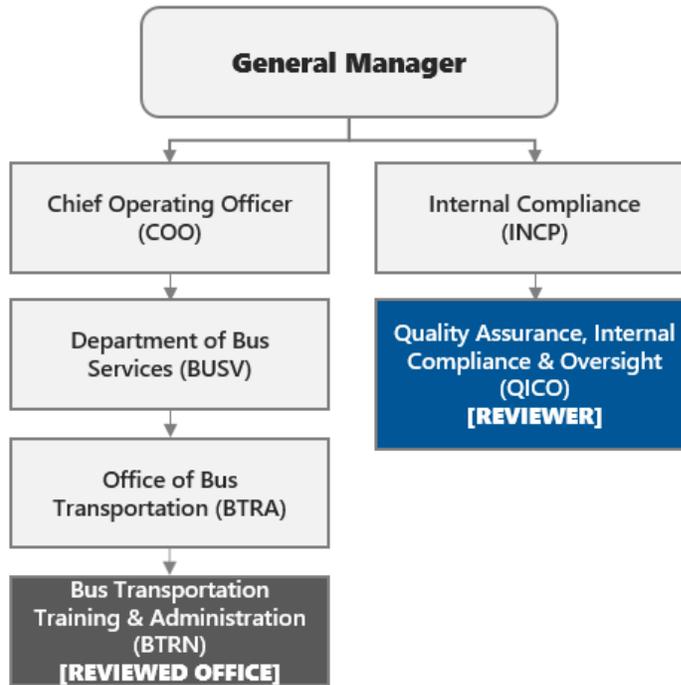
The Bus Transportation Training & Administration department (BTRN) is responsible for establishing and maintaining a comprehensive training program for all candidate and active bus operators, as well as other staff such as Transit Field Supervisors (TFSs). BTRN has had four different directors in the past five years. The current director of training was in an acting position at the start of this review. BTRN's new operator training program is a multi-week course that is inclusive of classroom instruction, driving exams, and Commercial Driver's License (CDL) tests which are administered by BTRN staff during the on-boarding process. As a way of maintaining operator proficiency, the operator refresher course is completed by all operators every two years and covers BTRA policies and procedures, as well as a wide variety of other topics applicable to operating a Metrobus. After a qualifying incident, accident, or infraction, the operator remedial training program is utilized as a corrective action to re-instruct operators on core BTRA procedures. BTRN maintains operator training records within the Peoplesoft Enterprise Learning Management (ELM) system.

This review will focus on adherence to existing BTRN policies, procedures, and processes. For the BTRN Internal Review, QICO has identified 11 applicable quality measures from Metro's [Quality Management System Plan \(QMSP\)](#). These are based on the [15 Core QMSP Standards](#), detailed on the final page of this document.

1. Management Responsibility
  2. Document Quality Management System
  4. Document Control
  6. Identification & Traceability of Assets & Material
  7. Process Control
  8. Inspection, Testing & Status
  10. Non-Conformance
  11. Corrective & Preventative Actions
  12. Quality Records
  14. Training
  15. Customer Focus
-

## Organizational Structure and Background

Within WMATA, Bus Transportation Training & Administration (BTRN) falls under the Office of Bus Transportation (BTRA), within the Department of Bus Services (BUS), which reports to the Chief Operating Officer (COO). As shown in the organization chart, QICO is independent of this function, reporting to the General Manager through Internal Compliance (INCP). The scope of this internal review is to assess areas for improvement within Metrobus operations training.



## 6.2. REVIEW SCOPE

### Documentation Review

- Document Control Process BUSV – P3.0
- BTRN Course Catalog January 2020
- 10 Day Non-Passenger Bus (NPB) Lesson Plan 09.2019 (004)
- Fatigue Policies 10.6/10.7
- CDL Training DC.MD.VA. Student Guide 10.22.18
- Process Control Procedure WMATA-INCP-1.07.01
- Safety and Training Instructor Training Manual December 2019 Rev. 3
- Bus Operator Refresher Participant Guide October 2019
- Non-Passenger Bus: Instructor Lesson Plan

### Personnel Discussions

- BTRN Director
- BTRN Supervisor, Training Data Analysis

### Field Assessments

- QICO assessors attended the following BTRN courses:
  - o Operator Remedial
  - o Operator Refresher
  - o New Operator
  - o Fatigue Awareness
  - o Sexual Harassment

### 6.3. AREAS FOR IMPROVEMENT

Findings are categorized by the [15 Core QMS Standards](#) and rated by the [Risk Assessment](#)

FQ-BTRN-20-01 Process Control

Service Delivery - Elevated (IMP 4, PROB 3)

Owner – BTRN

- Development of documented departmental procedures is necessary for consistent and controlled training processes.

#### Discussion

- Per Process Control Procedure WMATA-INCP-1.07.01: Metro departments identify the operation, service and maintenance processes that directly affect quality, ensuring that these processes are planned, implemented, and controlled.
- Through key personnel interviews and document reviews, QICO found that BTRN does not have formally documented processes or procedures for fundamental tasks performed by the department.
- Processes and procedures are necessary to standardize daily activities performed by BTRN. These activities include, but are not limited to:
  - o Curriculum development
  - o Training scheduling
  - o Processing training rosters
  - o Maintaining compliance data
  - o Classroom evaluations
  - o Maintaining regulatory compliance
- Development of departmental processes and procedures will clearly define roles, responsibilities, and workflow processes for all BTRN staff.

**FQ-BTRN-20-02 Non-Conformance**

**Service Delivery - Elevated (IMP 4, PROB 3) Owner – BTRN**

**- Accurate tracking of bus operator refresher training data will promote compliance with training requirements.**

**Discussion**

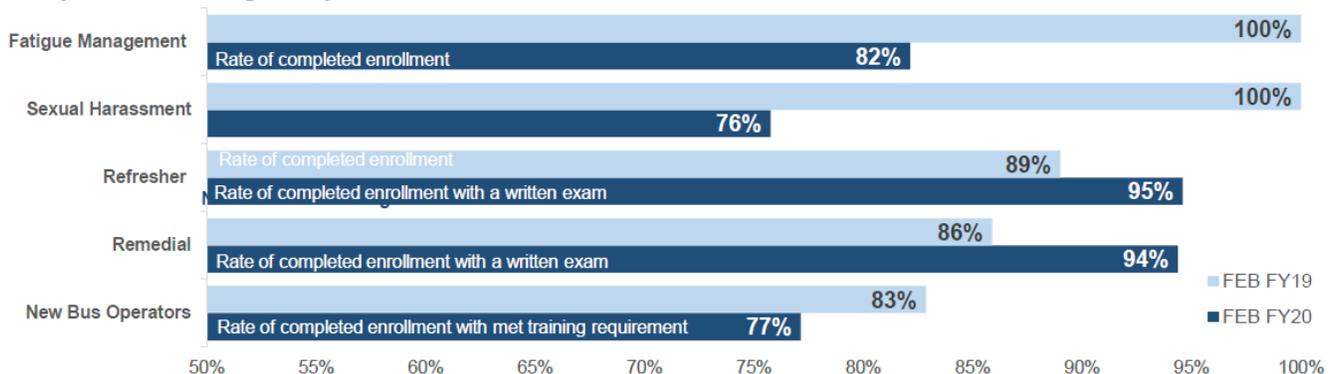
- Bus operators are required to complete refresher training every two years. This course is intended to reinforce the established departmental policies and procedures.
  - o BTRN send division management a report that details which operators are due for refresher training. The division then makes arrangements for the operator to attend the course.
  - o When the course is completed, BTRN uses the course roster and test scores to update the employee’s training status in Peoplesoft ELM where all training data is stored.
- Per FTA CAP b-2-2-a: Revise the Refresher Training course for Bus Operators and schedule staff to attend at a rate necessary to ensure completion on a three-year cycle (closed in 2017 and revised to a two-year cycle in 2019).
  - o Per FTA CAP b-2-2-a deliverable 4: Schedule the revised Bus Operator Refresher Training and generate a monthly report.
- QICO assessed Peoplesoft ELM training rosters for all refresher course graduates between March 01, 2017 and March 01, 2020.
  - o After an analysis of the Peoplesoft ELM data, QICO found that 574 (24%) of the active 2436 full-time operators had expired refresher training status as of 03/01/2020, seen in figure 1. This did not include part-time or inactive operators.
  - o During interviews and discussions, it was learned that once BTRN initially notifies division management of an operator in need of training, no follow-up notifications are made.

Figure 1: Active Operator Refresher Status



- Between March 01, 2017 and March 01, 2020, 271 operators unnecessarily completed the refresher course more than once. This data does not include operators that re-tested due to failing the course.
  - o Operators who pass the course and continue to attend creates inefficiency by both removing them from revenue service and using BTRN resources unnecessarily.
  - o Operators attending multiple refresher courses is not tracked.
- While BTRN reports monthly operator graduation rates via BusStat, BTRN does not report on overall compliance. Figure 2 is an example from the February 2020 BusStat report.

**Bus Operator Training Completion Rate**



- Accurately tracking and reporting on individual operator refresher training will help BTRN provide BTRA a clear status of the operators requiring training. Maintaining refresher training compliance ensures consistent operator proficiency and compliance with existing external corrective action plans.

**FQ-BTRN-20-03 Training****Service Delivery - Elevated (IMP 4, PROB 3) ■ Owner – BTRN**

- **Addressing the root cause of infractions is an effective approach to remedial training.**

**Discussion**

- BTRN provides a remedial training course that BTRA uses as a corrective action for incidents/accidents, operator infractions, and unsatisfactory evaluations. This class contains a general overview of BTRA SOPs and concludes with the student operating a bus under instructor observation.
- Through field assessments and key personnel discussions, QICO noted that remedial training is the same for every operator. The instructor is made aware of the operator's reason for attending remedial training to work on the specific issue that lead to the incident which put them into training.
  - o A two-day version of the course is administered when an operator has two major or three minor preventable accidents in a year; however, the curriculum for both days are identical.
  - o This two-day remedial course is one part of the two corrective actions used by BTRA as a final warning before dismissal.
  - o Operators attending multiple remedial courses is not tracked. Thus, additional root cause analysis and corrective actions cannot be taken.
- A remedial training course that addresses the root cause of infractions increases the effectiveness and efficiency of the remedial training program as well as improving the retention of operators.

**FQ-BTRN-20-04 Document Control Service Delivery - Moderate (IMP 2, PROB 5) Owner – BTRN/BTRA/SAFE**

- **Current and controlled policies, procedures, and standards provide clear direction and result in more consistent processes.**

**Discussion**

- Through document requests and searching available intranet files, QICO found that BTRA still maintains many outdated and superseded documents. Per BUSV P3.0, Document Control Policy section 6.2.1, SOPs will be reviewed every two years and revised as necessary. Document revision is to commence at least three months prior to revision date (section 6.2.2). Section 6.5.3 of the BUSV Document Control Process requires that obsolete documents be removed from circulation.
  - o As of the date of this report, all 28 of BTRA's available Bus Operations SOPs are expired, with all having last been reviewed July 2017.
  - o [Metroweb houses all Metrobus Operations SOPs individually. All 28 of these individual SOPs lack a controlling cover page.](#)
  - o [A separate file was found that contained all 28 Metrobus Operations SOPs within the same folder. All these documents were past due on review date.](#)
  - o [Metroweb's Bus Employee Handbook lacks a controlling cover page and was last reviewed May 2017.](#)
  - o [Six additional administrative SOPs with review dates of 2014 & 2015 are also stored on Metroweb.](#)
  - o BTRA's Division Manual was released in 2017 and lacks standard document control markings such as signatures and revision date. The manual states "The Bus Transportation Division Manual will be reviewed and updated annually. All changes and updated material is communicated to BTRA employees through training and reissuance of the updated Manual. Training courses and updated copies of this Manual will require the employee's signature and copy of signed sheets will be kept in the employee's file."
  - o The Accident/Incident Interview Form (page 83) in the Division Manual has no controls and assessors noted forms other than the approved Accident/Incident Interview Form were utilized.
- Metroweb currently has three unrelated SOPs with the same control number (SOP 1.0 Bereavement Leave, Military Leave, Jury Duty Leave, SOP 1.0 Accident and Incident Investigation Management and Process, SOP 1.0 Standard Operating Procedures).
- While Notice to Operators (NTOs) are a method for quickly getting important information to operators, NTOs marked "permanent" that modify a procedure (i.e. securing a bus) must be incorporated into a standard operating procedure and removed from Metroweb.
  - o Example 1: NTO #17-18, Six Steps to Safe Bus Securement, is still available. It has a remove date of "permanent". Also available via the intranet is NTO #19-26, also titled Six Steps to Safe Bus Securement. This NTO includes the revision that "Operators are to NEVER open/close the door from the driver's window nor start/turn off the bus from the driver's window. Additionally, the interlock is not a parking brake". This is also a permanent posting.
  - o Example 2: NTO #07-03, Log-on/Log-off, has been superseded by NTO #19-14
  - o Example 3: NTO #11-22, Winter Uniform Attire, has been superseded by NTO #19-23
  - o Example 4: NTO #18-35, Work Partners, has been superseded by NTO #19-21
  - o Example 5: NTO #19-13 Practicing Safety Observations to Avoid Contact with Pedestrians, has been superseded by #20-01
- All obsolete documents noted above were readily available on Metroweb.
- BTRA does not have a documented process for distributing information to operators, supervisors, and support personnel.
- QICO's Quality Management System Plan team is currently working with BUSV to revise their governing documents to comply with WMATA's QMSP, with a target completion of FYQ2 2021.

**FQ-BTRN-20-05 Process Control Preventative & Corrective Actions Service Delivery - Moderate (IMP 4, PROB 2) Owner – BTRN**

- Establishment of a formal quality control plan is essential for monitoring and improving BTRN activities.

**Discussion**

- Quality control plans are implemented as a way of monitoring key processes, analyzing data, and taking corrective actions accordingly.
- Through discussions with key personnel and document reviews, QICO found that BTRN does not employ a documented quality control plan to monitor key processes and take appropriate corrective actions.
  - o During field assessments in Fatigue Awareness, Sexual Harassment, Refresher, and Remedial training classes, QICO noted instructors not following established curriculum and allowing students to talk off topic for long periods of time.
  - o Through interviews QICO learned that training supervisors are not required to check-in on classes to ensure instructors are following the established curriculum.
- BTRA currently collects operating performance data through Transit Field Supervisor (TFS) field activities, annual evaluations, mystery rider evaluations, and customer feedback submitted to the Office of Customer Service (CSVC). This data is not formally utilized to drive improvement to the BTRN training curriculums.
  - o As noted in BTRA-20-04, a comprehensive quality control plan for BTRA will reveal opportunities for improvement across all Metrobus functions, including training.
  - o Through interviews and field assessments, QICO learned that BTRN does not have a process to utilize student completed course evaluation forms.
- The establishment of a formal quality control plan inclusive of classroom monitoring, student submitted course evaluation forms, and data driven performance improvement efforts will promote adherence to BTRN’s established curriculum, rules, and procedures as well as drive improvement within the department.

**FQ-BTRN-20-06 Document Control Service Delivery - Moderate (IMP 3, PROB 3) Owner – BTRN**

- Current and controlled training materials are essential for consistent training processes.

**Discussion**

- Per BUSV Document Control Process - P3.0 (released January 13, 2020), all controlled documents will be reviewed and/or revised two (2) years from the date of last revision.
- Controlling documents is a necessary process to establish a baseline set of working or approved documents and ensure only the current version of those documents are available for use such as training curriculum, test forms, and procedures.
- Through field assessments and document reviews, it was found that BTRN maintained outdated and inconsistent training materials.
  - o QICO reviewed the supplied training documents such as the 10 Day NPB Lesson Plan and CDL Training Guide and found that they were not document controlled.
  - o While performing field assessments, assessors noted two pages of the same exam had different revision dates and were beyond the revision timeline as shown in figures 3 and 4.
- A process for controlling classroom materials is essential for maintaining desired training outcomes.

Figure 3:

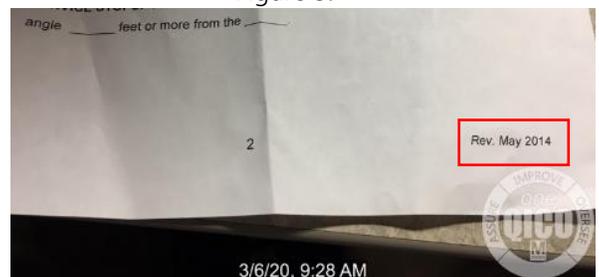
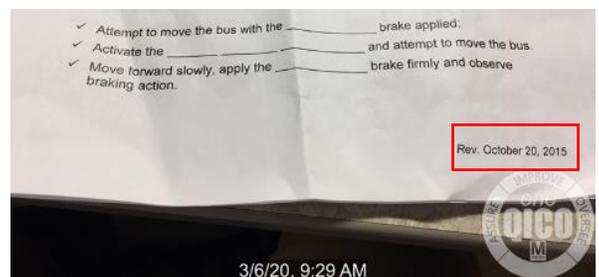


Figure 4:



## 6.4. SUMMARY OF REQUIRED ACTIONS

**QICO-BTRN-20-01** Action Owner – BTRN Overall Risk – Elevated (Average Score) ■

**Required Action: Identify all core BTRN functions and develop associated processes and procedures.**

### Applicable Findings

- **FQ-BTRN-20-01:** Development of documented departmental procedures is necessary for consistent and controlled training processes.
  - o **Standard:** Process Control **Risk:** Service Delivery – Elevated (IMP 4, PROB 3)

**QICO-BTRN-20-02** Action Owner – BTRN Overall Risk – Elevated (Average Score) ■

**Required Action: Establish a process for monitoring, maintaining, and reporting operator training compliance.**

### Applicable Findings

- **FQ-BTRN-20-02:** Accurate tracking of bus operator refresher training data will promote compliance with training requirements.
  - o **Standard:** Non-Conformance **Risk:** Service Delivery – Elevated (IMP 4, PROB 3)

**QICO-BTRN-20-03** Action Owner – BTRN Overall Risk – Elevated (Average Score) ■

**Required Action: Revise the remedial training program to target the root cause of operator infractions.**

### Applicable Findings

- **FQ-BTRN-20-03:** Addressing the root cause of infractions is an effective approach to remedial training.
  - o **Standard:** Training **Risk:** Service Delivery – Elevated (IMP 4, PROB 3)

**QICO-BTRN-20-04** Action Owner – BTRN Overall Risk – Moderate (Average Score) ■

**Required Action: Adhere to BUSV’s existing document control policy and remove or revise outdated and superseded documents.**

### Applicable Findings

- **FQ-BTRN-20-04:** Current and controlled policies, procedures, and standards provide clear direction and result in more consistent processes.
  - o **Standard:** Document Control **Risk:** Service Delivery – Moderate (IMP 2, PROB 5)
- **FQ-BTRN-20-06:** Current and controlled training materials are essential for consistent training processes.
  - o **Standard:** Document Control **Risk:** Service Delivery – Moderate (IMP 3, PROB 3)

**QICO-BTRN-20-05** Action Owner – BTRN Overall Risk – Moderate (Average Score) ■

**Required Action: Develop and implement a documented Quality Control Plan (QCP) to promote consistent department performance.**

### Applicable Findings

- **FQ-BTRN-20-05:** Establishment of a formal quality control plan is essential for monitoring and improving BTRN activities.
  - o **Standard:** Documented Quality Management System **Risk:** Service Delivery – Moderate (IMP 2, PROB 5)

[Internal Corrective and Preventive Actions \(ICAPAs\)](#) are designated to address each Required Action listed above.



Washington Metropolitan Area Transit Authority

## INTERNAL REVIEW 2020

### Internal Review: **Service Delivery** **(7) Rail Planning & Scheduling**

July 17, 2020



Quality Assurance, Internal Compliance & Oversight (QICO)

*Promoting Transparency, Accountability, & Public Confidence*



ENGINEERING &  
MAINTENANCE



SERVICE  
DELIVERY



CAPITAL PROGRAM –  
MANAGEMENT  
& EXECUTION



INTERNAL SAFETY  
REVIEW



**What is QICO?**

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. QICO and the internal review process are authorized by the General Manager as outlined in the [Quality Management System Plan \(QMSP\)](#).

**Why QICO Performed This Review:**

- This internal review is intended to provide Metro senior management with an assessment of the state of Rail Planning & Scheduling’s processes and promote the actions needed to address any concerns.

**QICO’s Methodology:**

- Develop relevant review activities by identifying and assessing any risks to align with the QMSP 15 Core Standards.
- Review documentation, observe processes, and interview key personnel.
- Findings and required actions are based on risk rating, which ranges on a scale from “Insignificant” to “High”.

**INTERNAL REVIEW SUMMARY**

July 2020

**(7) Rail Planning & Scheduling**



**Key Takeaway:**

*The establishment of departmental processes and procedures will promote compliance and consistency throughout all levels of the department.*

**Wins:**

- ✓ Potential schedule conflicts are identified and corrected prior to release of schedule to the operations group.
- ✓ RPLN scheduling continues to process schedule adjustments, now remotely, since the onset of the COVID-19 crisis.

**Areas for Improvement:**

- Development of documented departmental procedures is necessary for consistent and controlled processes.
- Establishment of a formal quality control plan is essential for monitoring and improving RPLN activities.
- Current and controlled departmental documents are essential for consistent processes.
- A documented training matrix for all job positions provides assurance that all personnel are adequately qualified to perform their assigned work.
- Secure document retention is an essential part of overall document control.

**Required Actions:**

- **QICO-RPLN-20-01:**
  - o Develop a process or procedure for each of RPLN’s core functions.
  - o Develop a departmental quality control plan in accordance with established WMATA quality requirements.
  - o Develop a departmental document control procedure.
  - o Establish a policy that outlines the requirements for secure document storage, retention, and archiving.
- **QICO-RPLN-20-02:** Create a training matrix that identifies all required training for each position within RPLN.

**Note:** An itemized internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measurable resolution of identified concerns. To check the status of iCAPA implementation go to <https://www.wmata.com/initiatives/transparency>

## 7.1. FUNCTIONAL OVERVIEW AND STRUCTURE

### Rail Planning & Scheduling

Rail Planning and Scheduling (RPLN) is responsible for timely planning and scheduling of work assignments for the operation of Metro's rail network to help ensure safe, secure, and efficient passenger and employee movement during daily operations, special events, and periods of infrastructure maintenance work. This is done in accordance with Metro's established policies, procedures and standards.

The function of rail planning and scheduling was previously conducted by the Rail Office of Planning and Scheduling (ROSC). As the various departments within RAIL were reorganized in 2017 and 2018, RPLN was created and moved from the Office of Rail Transportation (RTRA) to the Operations, Budget, Performance & Planning (OBPP) department. RPLN performs the service planning function; however, some planning and analysis is also performed by the Strategy, Planning and Program Management (SPPM) group. The RPLN scheduling functions are conducted by a relatively small group comprising one manager, three analysts, and four compilers.

RPLN functions include:

- Developing rail operation schedules and work assignments to meet rail service and contractual pick requirements
- Providing schedules for special events and track maintenance work
- Conducting cost analysis for various operational alternatives and vehicle capacities
- Supporting the budgetary development process

Schedule adjustment are made in response to requests from various sources, to include:

- Board of Directors
- General Manager
- Rail Operations
- Intermodal Planning
- Wayside Work Planning
- Capital Delivery

Requests may be for short term events such as expected increased ridership for a holiday event, or for longer term events such as Metro's platform improvement projects. Minor Rail Schedule Adjustments (RSAs) can take just a few days to complete, while major schedule changes, which would require development of job assignment picks for Rail Operations, may take as long as two weeks to develop and release. Late and/or last-minute change requests can be problematic and may result in decreased time allowed for review and proofing of schedules.

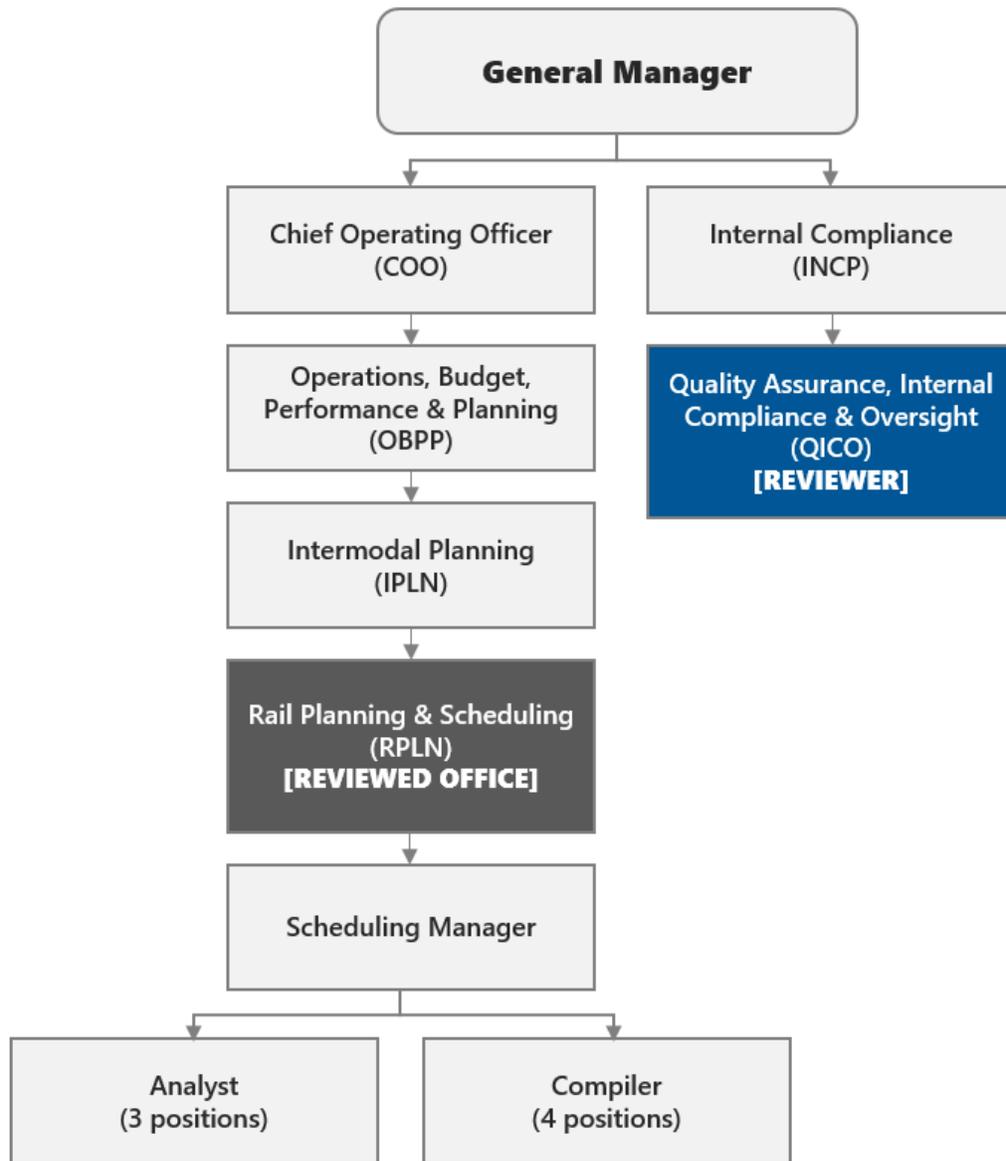
The official rollout for Metro's [Quality Management System Plan \(QMSP\)](#) for RPLN will take place by the end of Q3, CY2020. For this Internal Review, QICO has identified 7 applicable quality measures. These are based on the [15 Core QMSP Standards](#), detailed on the final page of this document.

1. Management Responsibility
2. Document Quality Management System
4. Document Control
7. Process Control
12. Quality Records
14. Training
15. Customer Focus

## Organizational Structure and Background

Within WMATA, the department of RPLN reports to the Chief Operating Officer (COO) through Operations, Budget, Performance & Planning (OBPP) and Intermodal Planning (IPLN). As shown in the organization chart, QICO is independent of this function, reporting to the General Manager through Internal Compliance (INCP).

The objective of the RPLN Internal Review (IR) is to internally validate management support of rail operations performed under the purview of RPLN are in compliance with WMATA establish Quality Elements.



## 7.2. REVIEW SCOPE

### Documentation Review

- RPLN Organization Chart, 4/2020
- ROSC Scheduling Business Process, 2014
- HASTUS Rostering Guide, 10/2013
- Responsibilities and Procedures for RPLN Hazard Management, 5/2020
- Rail Scheduling Training Manual (draft), 1/2016
- Rail Scheduling at WMATA (Onboarding presentation), 5/2020
- Quality Control Checklist, 5/2020
- 2017 SAFE ISR Checklist, 4/2017
- RSA Schedule, 6/2020
- Preview of Trackwork, 6/2020
- Minimum Headway Chart, 1/2020
- Loss of Yard Service Recovery Playbook, 9/2019
- Steering Committee Presentation, 1/2019
- TRB-AP065- Advanced Technologies (Training Materials), 1/2020
- Rail Operations Pick Process Outreach Meeting Notes, 1/2020 & 5/2020
- Rail Operators Pick Process, 5/2020
- Rail Station Managers Pick Process, 6/2020
- BOGYS Assignments, Driver Paddles, Headways (Examples of work schedules), 5/2020
- BOGYS Manifests (Examples of Operator Duty Assignments), 12/2019
- Eight (8) Rules Reports, exports from HASTUS, 12/2019
- Rostering Rest Rules in Action (email), 6/30/2020

### Personnel Discussions

- Director, RPLN
- Manager of Scheduling
- Manager of Scheduling System Support
- Analyst (2)
- Sr. Compiler

### 7.3. WHAT WORKED WELL (WINS)

Wins are categorized by the [15 Core OMS Standards](#) and rated by the [Risk Assessment](#)

**W-RPLN-20-01 Customer Focus Reduces Service Delivery Risk Owner – RPLN**

✓ **Potential schedule conflicts are identified and corrected prior to release of schedule to the operations group.**

**Discussion**

- Potential schedule conflicts, such as short headways, train block occupancy, short turnaround times, and possible conflicts with Fatigue Risk Management, are identified, addressed accordingly, and proofed by three levels of review.
- RPLN compilers, analysts, and schedule manager all review any Rail Schedule Adjustments (RSAs) prior to release to RTRA for operator picks and implementation of schedule.
- Quality assurance checklists are followed, initialed, and retained for each schedule adjustment.
- Corrected issues are discussed during RPLN weekly meetings to help raise awareness to prevent future occurrences.

**W-RPLN-20-02 Customer Focus Reduces Service Delivery Risk Owner – RPLN**

✓ **RPLN scheduling has continued to process schedule adjustments, now remotely, since the onset of the COVID-19 crisis.**

**Discussion**

- The RPLN scheduling group consists of four compilers, three analysts, and one manager. This relatively small group has kept up with all demands for schedule adjustments during this current situation.
- WMATA reduced service levels and closed stations in response to the national COVID-19 crisis. Rail schedules and operator duty cycles, which required a new operator pick, had to be adjusted accordingly.
- As with most employees at WMATA, RPLN staff began teleworking in mid-March, with only occasional office days. On May 27, a fire occurred at JGB. From that point forward, all RPLN functions were conducted remotely via telework. Many workers did not initially have access to all required software applications and had to locate and setup various means for access (Laptops, Tablets, secure VPN access, etc.).
- Schedule adjustment requests have continued to be processed for:
  - o Operator swing runs, to eliminate too many operators in break rooms for extended periods
  - o Operators on split shifts or A/B runs to reduce social interactions
  - o Multiple station closures and reduced service levels
  - o Accommodated advanced track maintenance work through rolling shutdowns of the system
  - o Projected return to normal service levels
  - o Orange/Silver Line summer shutdown
  - o Holiday events
- Despite all the challenges, RPLN has consistently maintained its output of all required schedule adjustments in response to the ever-changing conditions.

## 7.4. AREAS FOR IMPROVEMENT

Findings are categorized by the [15 Core QMS Standards](#) and rated by the [Risk Assessment](#)

**FQ-RPLN-20-01 Process Control** **Service Delivery - Elevated (IMP 4, PROB 3)** ■ **Owner – RPLN**

- **Development of documented departmental procedures is necessary for consistent and controlled processes.**

### Discussion

- Per Process Control Procedure WMATA-INCP-1.07.01: "WMATA departments identify the operation, service, and maintenance processes that directly affect quality, ensuring that these processes are planned, implemented, and controlled."
- Maintaining and controlling a set of processes is readily recognized as an essential activity for departments that directly operate transit service and are subject to strict regulatory requirements. (QMSP 3.5)
- Through key personnel interviews and document reviews, QICO found that RPLN does not have formally documented processes or procedures for fundamental tasks performed by the department.
- Processes and procedures are necessary to standardize daily activities performed by RPLN. These activities include, but are not limited to:
  - o Building Rail Schedule Adjustments (RSAs)
  - o Building Wayside Work schedules
  - o Creating runs, rosters, and pick schedules
  - o Merging rail schedules with Bus Planning for required shuttle services
  - o Exporting data for external usage (Google Transit)
- Development of departmental processes and procedures will clearly define roles, responsibilities, and workflow processes for all RPLN staff.

**FQ-RPLN-20-02 Process Control** **Service Delivery - Elevated (IMP 4, PROB 3)** ■ **Owner – RPLN**  
**Preventative & Corrective Actions**

- **Establishment of a formal quality control plan is essential for monitoring and improving RPLN activities.**

### Discussion

- Quality control plans are implemented as a way of monitoring key processes, analyzing data, and taking corrective actions accordingly.
- Departmental QMPs must identify the department's customers, define how quality can be described or measured, and identify targets or goals for quality (QMSP 3.13.1).
- Through discussions with key personnel and document reviews, QICO found that RPLN uses a quality checklist (Compilation Checklist) to ensure quality while compiling RSAs and pick schedules but does not employ a documented quality control plan to monitor key processes and take appropriate corrective actions.
- RPLN does not have rules or policy to limit the time for processing a request into a releasable schedule. Late or last-minute schedule revision requests could potentially limit the time available for RPLN staff to complete and verify all aspects of the proposed schedule.
- The establishment of a formal quality control plan inclusive of the use of quality control checklists, roles and responsibilities, and storage will ensure compliance with Metro's established Quality Elements and procedures, as well as drive improvement within the department.

**FQ-RPLN-20-03 Document Control** **Service Delivery - Elevated (IMP 4, PROB 3)**   **Owner – RPLN**

- **Current and controlled departmental documents are essential for consistent processes.**

**Discussion**

- Controlling documents is a necessary process to establish a baseline set of working or approved documents and ensure that only the current revision of those documents are available for use, such as policies, procedures, processes, and work instructions.
- Per Document Control Procedure WMATA-INCP-1.04.01, Section 1: Many documents (i.e., procedures, work instructions, manuals, policies, etc.) throughout WMATA were created and implemented prior to the implementation of the QMSP. They are still subject to this procedure and must be controlled.
- QICO initially requested nine departmental governing documents, all of which were found to have basic document control issues. For example, QICO requested RPLN Quality Records Policy and New Employee On-Boarding Process. The documents supplied by RPLN contained the following issues:
  - o Quality Records Policy is not identified by a unique control number, does not contain signatures of approval, and does not have release date, required review date, and revision history.
  - o New Employee On-Boarding Process is not identified by a unique control number, does not contain signatures of approval, does not have required review date or revision history, and is not protected from editing.
- Controlled departmental documentation promotes consistent working practices and consistent departmental outcomes and assures that personnel have access to authorized and current procedures.

**FQ-RPLN-20-04 Training** **Service Delivery - Moderate (IMP 3, PROB 3)**   **Owner – RPLN**

- **A documented training matrix for all job positions provides assurance that all personnel are adequately qualified to perform their assigned work.**

**Discussion**

- A departmental training matrix identifies staff training needs by job description.
- All personnel who perform work for WMATA shall be qualified based on education, experience and training (QMSP 3.12).
- Through key personnel interviews and document reviews, QICO found that RPLN does not have defined processes for the identification of training needs for all staff, establishing a training schedule, evaluating the training effectiveness and maintaining documentation.
- RPLN employees interviewed, across all positions (Compilers {Local 689}; Analysts {Local 2}; Managers, Director {Non-Rep}) state that they have had specific job training on the scheduling system, HASTUS, and have had On the Job Training (OJT) provided by peers within the RPLN offices, yet this is not documented.
- Development of departmental processes and procedures for training will clearly define roles, responsibilities, expected outcomes and workflow processes for all RPLN staff.

**FQ-RPLN-20-05 Quality Records****Service Delivery - Moderate (IMP 3, PROB 3) ■ Owner – RPLN****- Secure document retention is an essential part of overall document control.****Discussion**

- Quality records are the documents that provide objective evidence that procedures, work instructions, policies, processes, etc., have been executed as required. They are the documented evidence that work has been performed in accordance with the specifications, policies, procedures, and requirements of the department.
  - Document control policies or procedures will describe the method by which quality records are stored to prevent damage or loss. This shall include the security and back-up of electronic data. The means for storage of quality records shall allow for the ability to readily retrieve documents as needed for review and project use (QMSP 3.10).
  - Through key personnel interviews and document reviews, QICO found that RPLN does not have a defined process for secure document retention.
    - o RPLN stated that some documents (for example the Compilation Checklist) are stored as paper copies at Jackson Graham Building (JGB), some documents are stored on individual desktop computers, and some documents stored on a shared drive.
    - o Due to the current telework and limited JGB access, some of these documents are not available remotely.
  - Proper document retention and archiving practices, as outlined in Policy Instruction 6.1.5, are an essential function of departmental document control that ensures employee access to all materials.
-

## 7.5. SUMMARY OF REQUIRED ACTIONS

**QICO-RPLN-20-01** Action Owner – RPLN

Overall Risk – Elevated (Average Score) ■

**Required Actions:**

- Develop a process or procedure for each of RPLN’s core functions.
- Develop a departmental quality control plan in accordance with established WMATA quality requirements.
- Develop a departmental document control procedure.
- Establish a policy which outlines the requirements for secure document storage, retention and archiving.

Applicable Findings

- **FQ-RPLN-20-01: Development of documented departmental procedures is necessary for consistent and controlled processes.**
  - o **Standard:** Process Control. **Risk:** Service Delivery- Elevated (IMP 4, PROB 3)
- **FS-RPLN-20-01: Development of documented departmental procedures is necessary for consistent safety oversight within all processes.**
  - o **Measure:** Policies, Procedures & Standards. **Risk:** Service Delivery – Elevated (IMP 4, PROB 3)
- **FQ-RPLN-20-02: Establishment of a formal quality control plan is essential for monitoring and improving RPLN activities.**
  - o **Standard:** Process Control. **Risk:** Service Delivery- Elevated (IMP 4, PROB 3)
- **FQ-RPLN-20-03: Current and controlled departmental documents are essential for consistent processes.**
  - o **Standard:** Document Control. **Risk:** Service Delivery- Elevated (IMP 4, PROB 3)
- **FQ-RPLN-20-05: Secure document retention is an essential part of overall document control.**
  - o **Standard:** Quality Records. **Risk:** Service Delivery- Moderate (IMP 3, PROB 3)

**QICO-RPLN-20-02** Action Owner – RPLN

Overall Risk – Moderate (Average Score) ■

**Required Action: Create a training matrix which identifies all required training for each position within RPLN.**

Applicable Findings

- **FQ-RPLN-20-04: A documented training matrix for all job positions provides assurance that all personnel are adequately qualified to perform their assigned work.**
  - o **Standard:** Training. **Risk:** Service Delivery- Moderate (IMP 3, PROB 3)
- **FS-RPLN-20-02: A documented training matrix, including required departmental safety training, is essential for personnel to incorporate safe practices within their assigned work.**
  - o **Measure:** Training, Certification & Compliance **Risk:** Service Delivery – Moderate (IMP 3, PROB 3)

[Internal Corrective and Preventive Actions \(iCAPAs\)](#) are designated to address each Required Action listed above.



**Internal Review: Internal Safety Review**  
**(8) Rail Planning & Scheduling**

July 17, 2020



**Quality Assurance, Internal Compliance & Oversight (QICO)**  
*Promoting Transparency, Accountability, & Public Confidence*



**ENGINEERING &  
MAINTENANCE**



**SERVICE  
DELIVERY**



**CAPITAL PROGRAM –  
MANAGEMENT  
& EXECUTION**



**INTERNAL SAFETY  
REVIEW**



**What is QICO?**

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. QICO and the internal review process are authorized by the General Manager as outlined in the [Quality Management System Plan \(QMSP\)](#).

**Why QICO Performed This Review:**

- This internal review is intended to provide Metro senior management with an assessment of the Department of Rail Planning and Scheduling’s compliance with federal regulations and WMATA’s System Safety Program Plan (SSPP), and promote the actions needed to address any concerns.

**QICO’s Methodology:**

- Develop relevant review activities by identifying and assessing any risks to align with Policies, Procedures & Standards; Training, Certification & Compliance; Hazard Management; and Safety.
- Review documentation, observe processes, and interview key personnel.
- Findings and required actions are based on risk rating, which ranges on a scale from “Insignificant” to “High”.

**INTERNAL SAFETY REVIEW SUMMARY**

July 2020

**(8) Rail Planning & Scheduling**



**Key Takeaway:**

*The establishment of departmental processes and procedures will promote compliance and consistency throughout all levels of the department.*

**Wins:**

- ✓ Potential schedule conflicts (hazards) are identified and corrected prior to release of schedules to the operations group.
- ✓ Creation of emergency scenarios and mock-ups can be further developed into playbooks for use in an actual emergency situation.

**Areas for Improvement:**

- Development of documented departmental procedures is necessary for consistent safety oversight within all processes.
- A documented training matrix, including required departmental safety training, is essential for personnel to incorporate safe practices within their assigned work.

**Required Actions:**

- No separate internal Corrective and Preventive Action Plans (iCAPAs) are required for the areas of improvement identified. The findings will be considered addressed upon the satisfaction of the below Required Actions identified within the RPLN Internal Review which was conducted concurrently with this Internal Safety Review:
- **QICO-RPLN-20-01:** Develop a process or procedure for each of RPLN’s core functions.
- **QICO-RPLN-20-02:** Create a training matrix that identifies all required safety training for each position within RPLN.

**Note:** An itemized internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measurable resolution of identified concerns. To check the status of iCAPA implementation go to <https://www.wmata.com/initiatives/transparency>

## 8.1. FUNCTIONAL OVERVIEW AND STRUCTURE

### Rail Planning and Scheduling

WMATA's System Safety Program Plan (SSPP) establishes the requirements for systematically identifying, evaluating, and minimizing safety risks throughout all elements of the Metrorail, Metrobus, and Metro Access systems in accordance with applicable federal and regional requirements.

Rail Planning and Scheduling (RPLN) is responsible for the timely completion of planning and scheduling work assignments for the operation of Metro's rail network to help ensure safe, secure, and efficient passenger and employee movement during daily operations, special events, and periods of infrastructure maintenance work, in accordance with Metro's established policies, procedures, and standards.

The function of rail planning and scheduling was previously conducted by the Rail Office of Planning and Scheduling (ROSC). As the various departments within RAIL were reorganized in 2017 and 2018, RPLN was created and moved from the Office of Rail Transportation (RTRA) to the Operations, Budget, Performance & Planning (OBPP) department. RPLN performs the service planning function; however, some planning and analysis is also performed by the Strategy, Planning and Program Management (SPPM) group. The scheduling functions are conducted by a relatively small group comprising one manager, three analysts, and four compilers.

RPLN functions include:

- Developing rail operation schedules and work assignments to meet rail service and contractual pick requirements
- Providing schedules for special events and track maintenance work
- Conducting cost analysis for various operational alternatives and vehicle capacities
- Supporting the budgetary development process
- Capital Delivery

The objective of the RPLN Internal Safety Review (ISR) is to internally validate that the management of rail operations and communications performed under the purview of RPLN is in compliance with the WMATA 2018 SSPP.

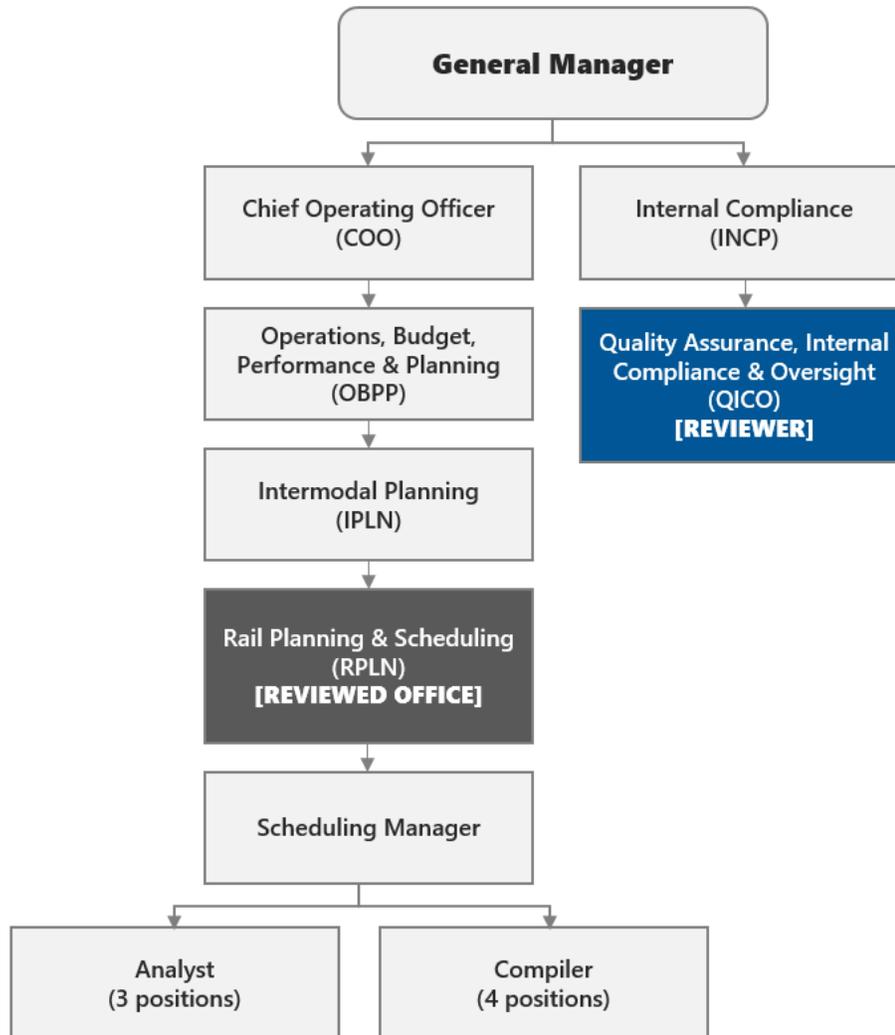
The SSPP defines 21 specific safety management elements, of which six (6) are identified as applicable for the scope of this review:

- Element 6- Hazard Management Process
- Element 9- Safety Data Collection
- Element 10- Accident Investigation
- Element 13- Rules Compliance
- Element 16- Training
- Element 18- Compliance with Local, State and Federal Requirements

## Organizational Structure and Background

Within WMATA, the department of RPLN reports to the Chief Operating Officer (COO) through Operations, Budget, Performance & Planning (OBPP) and Intermodal Planning (IPLN). As shown in the organization chart, QICO is independent of this function, reporting to the General Manager through Internal Compliance (INCP).

The objective of the RPLN Internal Safety Review (ISR) is to internally validate management support of rail operations performed under the purview of RPLN are in compliance with WMATA SSPP.



## 8.2. REVIEW SCOPE

### Documentation Review

- RPLN Organization Chart, 4/2020
- ROSC Scheduling Business Process, 2014
- HASTUS Rostering Guide, 10/2013
- Responsibilities and Procedures for RPLN Hazard Management, 5/2020
- Rail Scheduling Training Manual (draft), 1/2016
- Rail Scheduling at WMATA (Onboarding presentation), 5/2020
- Quality Control Checklist, 5/2020
- 2017 SAFE ISR Checklist, 4/2017
- RSA Schedule, 6/2020
- Preview of Trackwork, 6/2020
- Minimum Headway Chart, 1/2020
- Loss of Yard Service Recovery Playbook, 9/2019
- Steering Committee Presentation, 1/2019
- TRB-AP065- Advanced Technologies (Training Materials), 1/2020
- Rail Operations Pick Process Outreach Meeting Notes, 1/2020 & 5/2020
- Rail Operators Pick Process, 5/2020
- Rail Station Managers Pick Process, 6/2020
- BOGYS Assignments, Driver Paddles, Headways (Examples of work schedules) 5/2020
- BOGYS Manifests (Examples of Operator Duty Assignments) 12/2019
- Eight (8) Rules Reports, exports from HASTUS, 12/2019
- Rostering Rest Rules in Action (email) 6/30/2020

### Personnel Discussions

- Director, RPLN
- Manager of Scheduling
- Manager of Scheduling System Support
- Analyst (2)
- Sr. Compiler

### 8.3. WHAT WORKED WELL (WINS)

Wins are categorized by the [System Safety Measures](#) and rated by the [Risk Assessment](#)

**W-RPLN-20-01 Safety Reduces System Modification Risk Owner – RPLN**

- ✓ Potential schedule conflicts (hazards) are identified and corrected prior to release of schedules to the operations group.

**Discussion**

- Potential schedule hazards, such as short headways, train block occupancy, short turnaround times, and possible conflicts with Fatigue Risk Management, are identified, addressed accordingly, and proofed by 3 levels of review.
- RPLN compilers, analysts, and schedule manager all review any Rail Schedule Adjustments (RSAs) prior to release to RTRA for operator picks and/ or implementation of schedule.
- Corrected issues are discussed during RPLN weekly meetings to help raise awareness and prevent future occurrences.

**W-RPLN-20-02 Safety Reduces Emergency Management Risk Owner – RPLN**

- ✓ Creation of emergency scenarios and mock-ups can be further developed into playbooks for use in an actual emergency situation.

**Discussion**

- RPLN takes a proactive approach to emergency response by creating emergency scenarios, mock-up schedules, and loss of yard playbooks which can be used by Rail Operations in case of an actual emergency or incident.
- Requests for specific types of scenarios can be made by the Chief Operating Officer (COO), Rail Services (RAIL), Wayside Work Planning (WWPL), or as a result of RailStat meetings.
- A Loss of Yard playbook has been developed, by request of the COO, to provide guidelines for service recovery in case of losing service from any one of the rail yards. Guidelines within this playbook will be used during the Summer 2020 shutdown of the Alexandria Yard. Expectations are to keep this playbook updated as rail car block assignments may shift between the rail service yards.
- Creation of these scenarios helps to ensure consistent and safe service delivery during emergency situations.

## 8.4. AREAS FOR IMPROVEMENT

Findings are categorized by [System Safety Measures](#) and rated by the [Risk Assessment](#)

### FS-RPLN-20-01 Policies, Procedures & Standards

Service Delivery - Elevated (4,3)

Owner – RPLN

- **Development of documented departmental procedures is necessary for consistent safety oversight within all processes.**

#### Discussion

- Maintaining and controlling a set of processes is readily recognized as an essential activity for departments that directly operate transit service and are subject to strict regulatory requirements (QMSP 3.5).
- It is incumbent on all departments to formally document all required plans, programs, processes, protocols, methodologies and procedures in order that the documentation can be reviewed for this critical requirement of the Internal Review process and for compliance with the SSPP (SSPP 12.3.3).
- During the previous ISR, conducted February 2017, SAFE reported compliance of the (then) Rail Office of Planning and Scheduling (ROSC) department with policy documentation, Standard Operating Procedures (SOPs), and management methodologies- all in reference to the governing Operations Administrative Procedure (OAP) (OAP 101-03). As the various departments within RAIL were reorganized in 2017 and 2018, RPLN was created and moved from the Office of Rail Transportation (RTRA) to the Operations, Budget, Performance & Planning (OBPP) group, this OAP is no longer applicable to this department.
- Through key personnel interviews and document reviews, QICO found that RPLN does not have current processes or procedures specifically for RPLN. Documents that were provided for review were from the previous ROSC group or were in various stages of draft form.
- The official rollout for Metro's [Quality Management System Plan \(QMSP\)](#) for RPLN will take place by the end of Q3, CY2020. This will require development of departmental documentation in accordance to established Metro core standards.
- The peer group under Intermodal Planning (IPLN) is Bus Planning and Scheduling (BPLN). BPLN has a library of department specific documentation, created by a contracted source. This approach can be taken by RPLN to provide their required documents.

### FS-RPLN-20-02 Training, Certification & Compliance

Service Delivery - Moderate (3,3)

Owner – RPLN

- **A documented training matrix, including required departmental safety training, is essential for personnel to incorporate safe practices within their assigned work.**

#### Discussion

- Each department is responsible for establishing safety training requirements, in conjunction with SAFE (SSPP 16.1).
- RPLN employees interviewed across all positions (Compilers {Local 689}; Analysts {Local 2}; Managers, Director {Non-Rep}) state that they have had specific job training on the scheduling system, HASTUS, and have had On the Job Training (OJT) provided by peers within the RPLN offices. None of the aforementioned have had any specific safety training (other than new employee orientation).
- The OJT training process is not documented.
- QICO requested a training matrix for all RPLN positions, but there is not one available.
- Established departmental safety training requirements would ensure awareness among all employees of specific knowledge, skills and abilities, such as how to identify, correct, and prevent existing or potential scheduling hazards.

## 8.5. SUMMARY OF REQUIRED ACTIONS

**QICO-RPLN-20-01** Action Owner – RPLN

Overall Risk – Elevated (Average Score) ■

Required Action: Develop a process or procedure for each of RPLN's core functions.

### Applicable Findings

- **FS-RPLN-20-01: Development of documented departmental procedures is necessary for consistent safety oversight within all processes.**
  - o **Measure:** Policies, Procedures & Standards. **Risk:** Service Delivery – Elevated (IMP 4, PROB 3)
- **FQ-RPLN-20-01: Development of documented departmental procedures is necessary for consistent and controlled processes.**
  - o **Standard:** Process Control. **Risk:** Service Delivery- Elevated (IMP 4, PROB 3)

**QICO-RPLN-20-02** Action Owner – RPLN

Overall Risk – Moderate (Average Score) ■

Required Action: Create a training matrix that identifies all required safety training for each position within RPLN.

### Applicable Findings

- **FS-RPLN-20-02: A documented training matrix, including required departmental safety training, is essential for personnel to incorporate safe practices within their assigned work.**
  - o **Measure:** Training, Certification & Compliance **Risk:** Service Delivery – Moderate (IMP 3, PROB 3)
- **FQ-RPLN-20-04: A documented training matrix for all job positions provides assurance that all personnel are adequately qualified to perform their assigned work.**
  - o **Standard:** Training. **Risk:** Service Delivery- Moderate (IMP 3, PROB 3)

[Internal Corrective and Preventive Actions \(ICAPAs\)](#) are designated to address each Required Action listed above.



**Internal Review: Internal Safety Review**  
**(9) Department of Low Voltage Electrical Maintenance (LVEM)**

June 30, 2020



**Quality Assurance, Internal Compliance & Oversight (QICO)**  
*Promoting Transparency, Accountability, & Public Confidence*



**ENGINEERING &  
MAINTENANCE**



**SERVICE  
DELIVERY**



**CAPITAL PROGRAM –  
MANAGEMENT  
& EXECUTION**



**INTERNAL SAFETY  
REVIEW**



**What is QICO?**

- The Office of Quality Assurance, Internal Compliance & Oversight (QICO) is an internal management function that partners with other departments to provide an objective review. QICO and the internal review process are authorized by the General Manager as outlined in the [Quality Management System Plan \(QMSP\)](#).

**Why QICO Performed This Review:**

- This internal review is intended to provide Metro senior management with an assessment of the Department of Low Voltage Electrical Maintenance’s compliance with federal regulations and WMATA’s System Safety Program Plan (SSPP), and promote the actions needed to address any concerns.

**QICO’s Methodology:**

- Develop relevant review activities by identifying and assessing any risks to align with Policies, Procedures & Standards; Training, Certification & Compliance; Hazard Management; and Safety.
- Review documentation, observe processes, and interview key personnel.
- Findings and required actions are based on risk rating, which ranges on a scale from “Insignificant” to “High”.

**Note:** An itemized internal Corrective and Preventive Action (iCAPA) is developed for each required action to achieve effective and measurable resolution of identified concerns. To check the status of iCAPA implementation go to <https://www.wmata.com/initiatives/transparency>

**INTERNAL SAFETY REVIEW SUMMARY**

June 2020

**(9) Department of Low Voltage Electrical Maintenance (LVEM)**



**Key Takeaway:**

*Implementation of safety policies and procedures as well as documenting processes institute a safety culture and promote a safe working environment.*

**Areas for Improvement:**

- Complying with required Personal Protective Equipment (PPE) reduces risks associated with occupational tasks.
- Conducting required Job Safety Briefings enhances compliance with safety requirements, improves controls for risks, and incorporates utilization of hazard identification and mitigation.
- Utilization of documented Preventative Maintenance Instructions (PMI) before and during the performance of the PMIs promotes preparation and ensures the use of approved and pertinent equipment and tools.
- Reviewing and updating documented PMIs in accordance with the required periodicity promotes efficiency and safety.
- Establishing a documented process for the entire Maximo Work Order lifecycle promotes traceability and accountability.
- Adherence to WMATA and OSHA training requirements promotes compliance and minimizes risks associated with workplace hazards.
- Complying with the SMNT MCP Quality Control program promotes a culture of safety and the effective implementation of rules and procedures.

**Required Actions:**

- **QICO-LVEM-20-01:** Management oversight plan must reinforce the frequency and accuracy of compliance checks for job safety briefings and confirm that appropriate PPE, tools, and equipment are in place at the job site.
- **QICO-LVEM-20-02:** Develop and update current policies and procedures in accordance with the SMNT MCP standard.
- **QICO-LVEM-20-03:** Establish and implement a documented training program that encompasses all training requirements for LVEM personnel.

## 9.1. FUNCTIONAL OVERVIEW AND STRUCTURE

### Office of Low Voltage Electrical Maintenance (LVEM)

The Low Voltage Electrical Maintenance (LVEM) department is responsible for the maintenance of all WMATA 480-volt electrical systems and distribution equipment to ensure power is available for all passenger stations, rail yards, chiller plants, tunnels, fan shafts, bus facilities and support for start-up activities. LVEM personnel inspect, modify, overhaul, test and repair transfer switches, automatic voltage regulators, switch disconnectors, low voltage panels, and lights. LVEM is a sub-department of Systems Maintenance (SMNT), having split off from Traction Power (TRPM) three years ago to become its own department.

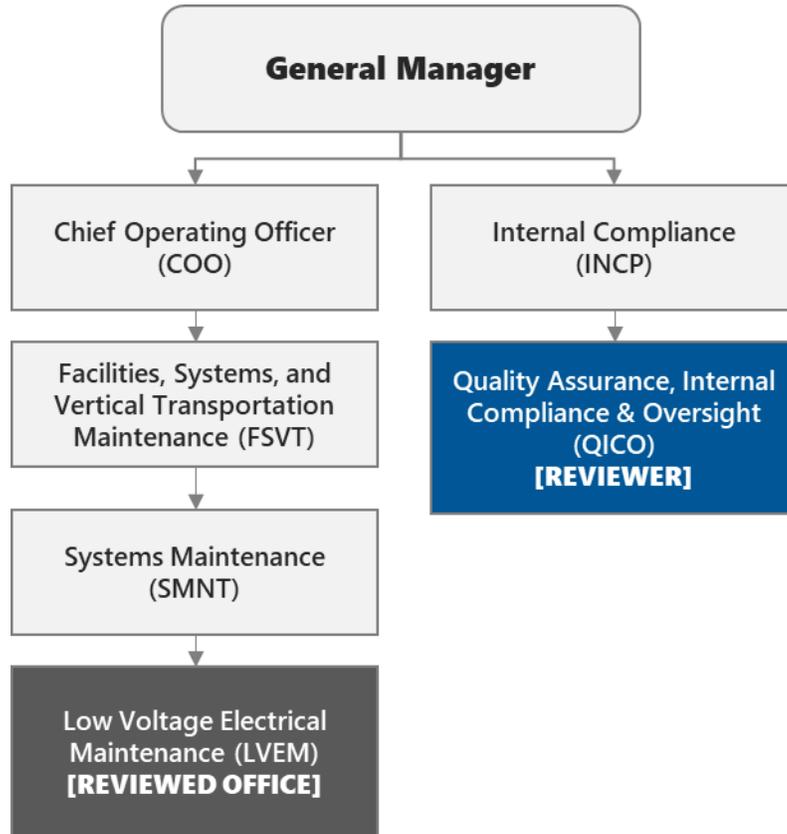
The objective of the LVEM Internal Safety Review (ISR) is to internally evaluate the safety of routine operations, new projects, systems, and training per WMATA's System Safety Program Plan (SSPP). The SSPP is an authority-wide safety plan created by the Department of Safety & Environmental Management (SAFE) in accordance with Federal Transit Administration (FTA) guidelines (49 CFR 659), and details WMATA's approach to satisfying the 21 required SSPP elements for system safety.

Out of the SSPP 21 Elements, the following 13 Elements were found applicable to LVEM:

- Hazard Management Process (Element 6)
- System Modification (Element 7)
- Safety Certification (Element 8)
- Safety Data Acquisition (Element 9)
- Accident Investigation (Element 10)
- Rules Compliance (Element 13)
- Facilities and Equipment Inspections (Element 14)
- Maintenance Audits and Inspections (Element 15)
- Training Certification (Element 16)
- Configuration Management and Control (Element 17)
- Local, State and Federal Regulations (Element 18)
- Hazardous Materials Program (Element 19)
- Procurement Process (Element 21)

## Organizational Structure and Background

The Office of Quality, Internal Compliance and Oversight (QICO) conducted an internal review of LVEM during the second quarter of calendar year 2020 (April – June). Within WMATA, the Office of Facilities, Systems, and Vertical Transportation Maintenance (FSVT), reports to the Chief Operating Officer (COO). Under FSVT, SMNT oversees the functions of LVEM. LVEM is responsible for maintaining electrical power (480V and below) throughout the WMATA system. As shown in the organization chart, QICO is independent of this function, reporting to the General Manager through Internal Compliance (INCP).



## 9.2. REVIEW SCOPE

### Documentation Review

- WMATA System Safety Program Plan (SSPP), (January 2018)
- LVEM Organization Chart (April 2020)
- LVEM Emergency Contact List, (no revision number or date)
- SOP 100-12 (Rev. 1, June 2019)
- SOP 100-21 (Rev 1, May 2019)
- SOP 200-03 Preventative Maintenance (Rev. 3, October 2000)
- SOP 200-05 Corrective Maintenance (Rev 4, October 2000)
- SOP 204-01 Equipment Calibration (Rev. 0.1, January 2020)
- OAP 100-01 Supervisory Inspections (Rev. 3, September 2018)
- LVEM Blanket Purchase Order List (no revision number or date)
- PMI for Lighting Inspections (Rev. 3, February 2018)
- PMI for Fan Shaft and Pump Inspections (Rev. 3, February 2018)
- Systems Maintenance (SMNT) Maintenance Control Policy (MCP) (Rev 3.2, July 2019)
- LVEM SMS Reports (no revision number or date)
- LVEM Level 1 and Level 2 submissions 2019 – 2020 (no revision number or date)
- LVEM Safety Committee Meeting Minutes January – March 2020 (no revision number or date)
- Power Electrician Job Description (January 1994)
- LVEM Training Matrix (no revision number or date)
- WMATA Manual of Design Criteria (Revision 3, November 2016)
- WMATA COOP Plan (February 2020)
- Electrical Safety training modules (3) (no revision number or date)

### Personnel Discussions

- Superintendent of LVEM (April 29, 2020)
- Three (3) Assistant Superintendents of LVEM (May 4, 2020)
- Two (2) LVEM Supervisors (May 5, 2020)

### Field Assessments

- One (1) Field Assessment performed for tunnel lighting Preventative Maintenance Inspection (PMI) (May 18, 2020)
- One (1) Field Assessment performed for station lighting PMI (May 19, 2020)
- One (1) Field Assessment performed for fan shaft PMI (May 21, 2020)

### 9.3. AREAS FOR IMPROVEMENT

Findings are categorized by [System Safety Measures](#) and rated by the [Risk Assessment](#)

**F-LVEM-20-01 Job Safety Safety - High (IMP 5, PROB 4) ■ Owner – LVEM**

**- Complying with required Personal Protective Equipment (PPE) reduces risks associated with occupational tasks.**

**Discussion**

Not wearing the required PPE exposes LVEM personnel to occupational risks. These risks may be reduced when personnel comply with the appropriate PPE as required in the associated PMIs and per SSPP, Element 18, "Personal Protective Equipment".

- During QICO’s Lighting PMI assessment conducted in the tunnel section between Waterfront and Navy Yard Stations on May 18, 2020, LVEM personnel were not using the proper cut-resistant Kevlar gloves to inspect and replace bulbs, as required by Lighting PMI 2.7, 3.2.2.
- During QICO’s Fan Shaft PMI assessment, conducted at Metro Center on May 21, 2020, LVEM personnel were not using the proper electrical-rated gloves (Class 0) when inspecting and testing equipment, as required by Fan Shaft PMI 3.0.

**F-LVEM-20-02 Job Safety Safety - Elevated (IMP 4, PROB 4) ■ Owner – LVEM**

**- Conducting required Job Safety Briefings enhances compliance with safety requirements, improves controls for risks, and incorporates utilization of hazard identification and mitigation.**

**Discussion**

- As required by MSRPH 4.2 (a). and SSPP Element 16, "Training and Certification Review/Audit – Overview", when additional personnel join the group or conditions change, job safety briefings need to be conducted to capture these hazards and ensure the safety of all on site throughout the shift.
- During two (2) of the three (3) Field Assessments conducted by QICO, LVEM personnel did not perform a job safety briefing when QICO personnel joined the group.
  - o Station lighting assessment (May 19, 2020)
  - o Fan shaft assessment (May 21, 2020)

**F-LVEM-20-03 Job Safety Safety – Moderate (IMP 3, PROB 4) ■ Owner – LVEM**

**- Utilization of documented Preventive Maintenance Instructions (PMI) before and during the performance of the PMIs promotes preparedness and ensures the use of approved and pertinent equipment and tools.**

**Discussion**

During the three (3) Field Assessments performed by QICO, LVEM personnel did not have copies of the equipment manuals, wiring diagrams, or applicable PMIs, as required by Fan Shaft PMI 3.2.1, 4.1, Lighting PMI 2.3, and SSPP, Element 17 "Configuration Management".

- Having equipment manuals and wiring diagrams on hand helps personnel diagnose and troubleshoot problems in the event an unforeseen issue emerges during an inspection.
- During two (2) Field Assessments performed by QICO, LVEM personnel did not have the required voltmeter or light meter on hand as required by the PMI.
  - o During QICO’s Tunnel Lighting Field Assessment, LVEM personnel used a voltage testing pen instead of a voltmeter as required by the PMI. Using tools not listed in the PMI increases the likelihood of inaccurate results and may expose personnel to additional risks.
- On the Lighting PMI at F04, the voltage testing pen used by LVEM personnel did not have a calibration sticker. Without a calibration sticker, personnel may be exposed to electrical risks.

**F-LVEM-20-04 Application & Fulfillment Service Delivery - Low (IMP 2, PROB 2) Owner – LVEM**

- **Reviewing and updating documented PMIs in accordance with the required periodicity promotes efficiency and safety.**

**Discussion**

- LVEM documents are required to be revised biannually as referenced in the SMNT MCP, Preventive Maintenance, and SSPP Element 16, "Training and Certification Review/Audit – Overview".
  - o QICO reviewed and noted the documents listed below as past due for revision:
    - o Lighting PMI [due for review and revision on 02/2020]
    - o Fan Shaft PMI [due for review and revision 02/2020]
- During QICO’s field assessment for tunnel lamp inspection on 5/17/2020, LVEM personnel were unable to replace multiple lamps as they were unable to access them with the ladder on hand. Having an updated PMI that is inclusive of all tools and equipment promotes efficiency.
- Given the importance of these plans, adherence to review and revision dates optimizes LVEM’s ability to safely and efficiently perform work.

**F-LVEM-20-05 Configuration Management Service Delivery - Low (IMP 2, PROB 2) Owner – LVEM**

- **Establishing a documented process for the entire Maximo Work Order lifecycle promotes traceability and accountability.**

**Discussion**

During a field assessment conducted by QICO, LVEM personnel informed QICO that Maximo Workorders (WO) would be created for a follow-up maintenance as per SSPP Element 17 "Configuration Management".

- QICO reviewed Maximo WOs for traceability and status and observed the following:
    - o Three (3) separate WO numbers created in Maximo by LVEM were tracked,
    - o Of the three (3) WOs, one (1) was found in WO Tracking (POWR) with no subgroup,
    - o One (1) WO was found in WO Tracking (POWR) subgroup LVEMGBLT, and
    - o One (1) WO could not be located in any Maximo field.
  - Additionally, LVEM personnel are creating Maximo WOs in multiple Maximo tabs, including the POWRLV OPEN WO (WMATA) tab which is separate from the WO Tracking (POWR) database.
  - Logging of work orders in a consistent Maximo tab is essential to effectively create, monitor, track, and perform outstanding maintenance.
- LVEM provided QICO with a list of only three (3) WOs of the associated Preventative Maintenance (PM) which was not inclusive of all work identified during the work performed.
- Following the three (3) field assessments, QICO conducted a search to locate the follow up Corrective Maintenance WOs in Maximo; however, QICO was unable to locate any respective WO.
- QICO reviewed all submitted documents and the SMNT MCP and none were found to have any defined process or control for Maximo.
  - Having a documented process that describes the steps to create and locate WOs reduces inconsistency and promotes traceability.

**F-LVEM-20-06 Safety Training & Certification**

**Safety - Elevated (IMP 4, PROB 4)**

**Owner – LVEM**

- **Adherence to WMATA and OSHA training requirements promotes compliance and minimizes risks associated with workplace hazards.**

**Discussion**

- The LVEM Training Matrix found in the SMNT MCP lists 27 courses for Mechanic AA as required; however, none of the employees listed in the matrix provided to QICO by LVEM has completed all the required courses. Compliance with departmental training is listed in SSPP Element 16, "Compliance with Training Requirements".
- LVEM's PMIs state that at least one (1) person working within a work group is a Qualified Person. A Qualified Person is someone who has been trained in OSHA CFR29 1910.269, Electrical Safety and CPR.

Out of the 12 separate shifts reviewed by QICO:

- o Six (6) shifts did not have any Qualified Persons.
- o Three (3) shifts had only one (1) Qualified Person
- o Three (3) shifts had two (2) Qualified Persons.

Having the required Qualified Person per shift enhances job safety and fulfills the PMI requirement of at least one Qualified Person per work group.

- Additionally, the Training Matrix provided to QICO did not have a revision number or date. Per SSPP 16.1, it is the responsibility of each department head or their designee to develop, maintain and verify that the matrix is kept current.

- **Outside of the required training:**

- o The Office of LVEM instituted training developed by the National Center for Construction Education & Research (NCCER) modules in September of 2018 as additional training for all LVEM personnel. LVEM conducts and monitors this training internally.
- o LVEM has instituted the following comprehensive electrical safety modules to provide training in workplace safety:
  - Electrical Safety
  - Basic Safety (Construction Site Safety Orientation)
  - Basic Safety II (Construction Site Safety Orientation)
- o Additional safety training highlights LVEM's continued emphasis on training and illustrates their dedication to cultivating a strong safety culture within the department.

F-LVEM-20-07 Safety Management

Safety - High (IMP 4, PROB 5) ■ Owner- LVEM

- **Complying with the SMNT MCP Quality Control program promotes a culture of safety and the effective implementation of rules and procedures.**

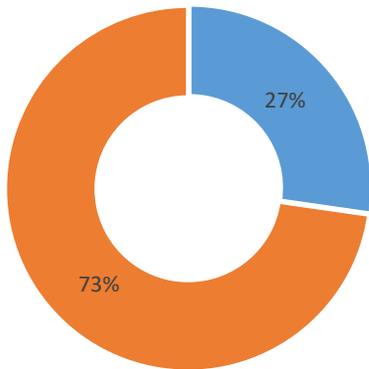
**Discussion**

Level I and Level II Quality Control (QC) checks are not performed to the minimum requirements specified in the SMNT MCP and SSPP Element 13, "Rules and Procedures Compliance and Review".

- In accordance with the SMNT MCP, all Assistant Superintendents are required to perform two (2) Level II QC checks per month. For Fiscal Year 2020, Level II QC checks were 27% compliant with the required minimum, with only nine occurrences out of 33 (See Figure 1).
- In accordance with the SMNT MCP, all Supervisors are required to perform a minimum of eight Level I QC checks per month. For FY 2020, Level I QC checks were 23% compliant, with only 50 occurrences out of 143 (See Figure 2).

These compliance checks assess the quality of the work as well as safe operations on the job site, such as PPE verification, safe execution of work, and proper tools and equipment for the job.

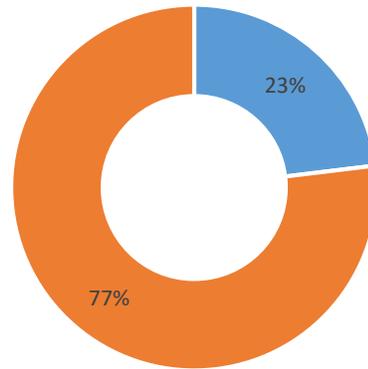
Level II QC Checks  
FY 2020



■ Compliant ■ Non-Compliant

Figure 1

Level I QC Checks  
FY 2020



■ Compliant ■ Non-Compliant

Figure 2

## 9.4. SUMMARY OF REQUIRED ACTIONS

**QICO-LVEM-20-01** Action Owner – LVEM Overall Risk – High (Average Score) ■

**Required Action: Management oversight plan must reinforce the frequency and accuracy of compliance checks for job safety briefings and confirm that appropriate PPE, tools, and equipment are in place at the job site.**

Applicable Findings

- **F-LVEM-20-01:** Complying with required Personal Protective Equipment (PPE) reduces risks associated with occupational tasks.
  - o **Measure:** Job Safety. **Risk:** High – Risk Rating (IMP 4, PROB 5)
- **F-LVEM-20-02:** Conducting required Job Safety Briefings enhances compliance with safety requirements, improves controls for risks, and incorporates utilization of hazard identification and mitigation.
  - o **Measure:** Job Safety. **Risk:** Elevated – Risk Rating (IMP 4, PROB 4)
- **F-LVEM-20-03:** Utilization of documented Preventive Maintenance Instructions (PMI) before and during the performance of the PMIs promotes preparation and ensures the use of approved and pertinent equipment and tools.
  - o **Measure:** Application & Fulfillment. **Risk:** Moderate– Risk Rating (IMP 3, PROB 4)
- **F-LVEM-20-07:** Complying with the SMNT MCP Quality Control program promotes a culture of safety and the effective implementation of rules and procedures.
  - o **Measure:** Application & Fulfillment. **Risk:** High – Risk Rating (IMP 4, PROB 5)

**QICO-LVEM-20-02** Action Owner – LVEM Overall Risk – Low (Average Score) ■

**Required Action: Develop and update current policies and procedures in accordance with the SMNT MCP standard.**

Applicable Findings

- **F-LVEM-20-04:** Reviewing and updating documented PMIs in accordance with the required periodicity promotes efficiency and safety.
  - o **Measure:** Application & Fulfillment. **Risk:** Low – Risk Rating (IMP 2, PROB 2)
- **F-LVEM-20-05:** Establishing a documented process for the entire Maximo Work Order lifecycle promotes traceability and accountability.
  - o **Measure:** Application & Fulfillment. **Risk:** Low – Risk Rating (IMP 2, PROB 2)

**QICO-LVEM-20-03** Action Owner – LVEM Overall Risk – Elevated (Average Score) ■

**Required Action: Establish and implement a documented training program that encompasses all training requirements for LVEM personnel.**

Applicable Findings

- **F-LVEM-20-06:** Adherence to WMATA and OSHA training requirements promotes compliance and minimizes risks associated with workplace hazards.
  - o **Measure:** Safety Training & Certification. **Risk:** Elevated – Risk Rating (IMP 4, PROB 4)

[Internal Corrective and Preventive Actions \(iCAPAs\)](#) are designated to address each Required Action listed above.

**INTERNAL CORRECTIVE & PREVENTIVE ACTIONS (iCAPAS)**

## **Bus Operations (BTRA) iCAPAs**

Return to [Summary of Required Actions](#)



INTERNAL REVIEW

Service Delivery

In response to the Internal Review report regarding Metrobus Transportation Operations (BTRA), the Office of Quality Assurance Internal Compliance & Oversight (QICO) has coordinated the development of seven (7) iCAPAs. These iCAPAs have been developed to address the associated findings and required actions.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Joseph Leader



Joseph Leader  
Executive Vice President & Chief Operating Officer

Date

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Hakim Davis



Hakim Davis  
Vice President, Quality Assurance, Internal Compliance & Oversight (QICO)

Date

Eric L. Christensen



Eric Christensen  
Executive Vice President, Internal Compliance (INCP)

Date



Paul J. Wiedefeld  
General Manager & Chief Executive Officer (GM/CEO)

Date



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address the associated finding and required action for QICO-BTRA-20-01.

FINDING

Measuring the impact of fatigue on incidents and accidents will increase employee and customer safety and reduce impact on service delivery.

REQUIRED ACTION

QICO-BTRA-20-01

*Bus Transportation (BTRA)*  
*Bus Operations Communications Center (BOCC)*  
*Transit Performance Management (PERF)*  
*Safety & Environmental Management (SAFE)*

*Risk: High*



Implement controls to monitor and mitigate the impact of operator fatigue.

*Measure: Process Control Risk Category: Safety 5,4*

ACTION PLAN OVERVIEW

Bus Transportation (BTRA) will partner with the Bus Street Operations team and the Department of Safety & Environmental Management (SAFE) to develop and implement processes to improve and sustain consistency in the recording of Fatigue Risk Management (FRM) data. FRM data will be reported out on an ongoing basis, for consideration in developing schedules that support FRM in compliance with Authority policies.

In addition, on November 6, 2019 the Washington Metrorail Safety Commission (WMSC) re-issued a finding regarding an effective hours of service policy. SAFE is responsible for revising the WMATA Policy/Instruction 10.6, Fatigue Risk Management Policy and 10.7/1, Hours of Service Limitations for Prevention of Fatigue. The existing WMSC corrective action plans – WMSC-19-C0008a and WMSC-19-C0008b – are scheduled to be implemented by September 30, 2022.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Recording FRM Data Process	BTRA and Bus Operations Communications Center (BOCC)/Street Operations will develop a documented process to support consistent recording (data entry) of FRM data to incorporate existing incident management processes, including data audits. BTRA will submit the FRM Data Process.	Keith Sanders (BTRA) Supporting Office: Norman Williams (BOCC)	08/07/20	01/27/21
2. FRM Data Implementation	BTRA will submit three months of FRM data reports as per Actionable Item #1.	Keith Sanders (BTRA)	01/27/21	05/12/21
3. Hours of Service (HOS) Policy Violations Process	BTRA will develop and submit a documented monitoring process in alignment with WMATA HOS Policy violations.	Keith Sanders (BTRA)	10/12/20	06/30/21
4. HOS Policy Violations Implementation	BTRA will submit three months of consecutive HOS Policy Violations reports as per Actionable Item #3.	Keith Sanders (BTRA)	06/30/21	10/13/21
5. FRM Data Analysis Report	BTRA and Transit Performance Management (PERF) will develop a report using FRM data to include hours worked leading up to incidents and fatigue data collected post-incident to support scheduling adjustments. This report will include key performance metrics and corrective actions. BTRA will submit a FRM data analysis report.	Keith Sanders (BTRA) Supporting Office: Scarlett Cook (PERF)	01/25/21	12/01/21
6. QICO CAP Verification Report	QICO will evaluate submitted actionable items to confirm that there is reasonable evidence that the finding and subsequent required action have been resolved, taking actionable item descriptions and performance measures into account.	QICO	12/01/21	01/07/22

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



PERFORMANCE MEASURES

None.



RESPONSIBLE PARTIES

BTRA Keith Sanders



(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BOCC Norman Williams



(Signature/Date)

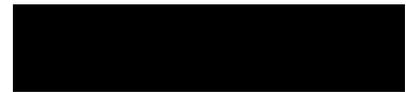
PERF Scarlett Cook



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRA-20-02.

FINDING

Onboard telemetry systems must be fully operational on each Metrobus to provide supporting data for customer smartphone applications, first responders, and effective Bus Operations Communication Center monitoring.

REQUIRED ACTION

QICO-BTRA-20-02

**Bus Transportation (BTRA)**

Risk: Elevated



Develop a comprehensive log-on process that includes criteria for supervisors and specialists, as well as data analysis and action plans.

*Measure: Non-Conformance Risk Category: Service Delivery 4,4*

ACTION PLAN OVERVIEW

The Bus Data Quality Group, which is comprised of representatives from Bus Maintenance (BMNT), Bus Transportation (BTRA), and the Office of Transit Performance Management (PERF) will continue to assess the root cause of intermittent log-on events and present their final findings and recommendations for mitigation. BTRA will implement measures to support consistency with operator log-ons.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Identify Cause for Intermittent Log-On Events	The Bus Data Quality group will continue to assess the reasons for intermittent log-on events and submit a report with findings, root cause analyses, and identified solutions for mitigation.  PERF will submit an intermittent log-on events report.	Scarlett Cook (PERF) Supporting Office: Ray Alfred (BMNT)	08/07/20	01/27/21
2. Intermittent Log-On Events Plan & Schedule	BTRA and BTSS will develop a plan in alignment with the findings, root cause analyses, and identified solutions for mitigation as per Actionable Item #1.  BTRA will submit the Intermittent Log-On Events plan with schedule.	Keith Sanders (BTRA) Supporting Offices: Norman Williams (BOCC) Ray Alfred (BMNT)	01/27/21	01/26/22
3. Log-on Compliance Checks Process	BOCC will develop and submit a documented process for monitoring Operator log-on compliance in the field to include monitoring of compliance metrics and corrective actions.	Norman Williams (BOCC) Supporting Office: Keith Sanders (BTRA)	10/19/20	05/26/21
4. Log-On Compliance Report	PERF will produce and submit monthly log-on compliance reports.  PERF will submit three months of consecutive reports.	Scarlett Cook (PERF)	01/18/21	05/26/21
5. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the actionable item descriptions and performance measures.	QICO	01/26/22	02/25/22

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



**PERFORMANCE MEASURES**

Evidence of signature acknowledgement that at least 95% of applicable active personnel received the new procedures as per Actionable Item #3.



RESPONSIBLE PARTIES

PERF	Scarlett Cook	
		(Signature/Date)
BOCC	Norman Williams	
		(Signature/Date)
BTRA	Keith Sanders	
		(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BMNT	Raphael Alfred	
		(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRA	Delores Proctor	
		(Signature/Date)
BUSV	Robert Potts	
		(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRA-20-03.

FINDING

A closed loop customer feedback process will drive improvements in Metrobus customer service.

REQUIRED ACTION

QICO-BTRA-20-03

**Bus Transportation (BTRA)**

Risk: Elevated



Create and execute a documented process to implement feedback resulting from customer complaints into Metrobus operations and training.

*Measure: Customer Focus Risk Category: Service Delivery 3,5*

ACTION PLAN OVERVIEW

BTRA will develop a formal process with timeframes for response and resolution of customer complaints received from the Office of Customer Service (CSVC). BTRA will collaborate with the Office of Transit Performance Management (PERF) to enhance CSVC data reporting to support timely closure of complaints and updates to Bus Training (BTRN) curricula.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Addressing Customer Complaints Process	BTRA will develop and submit a documented process to support timely response and resolution of customer complaints received via CSVC to include monitoring, key performance indicators, and corrective actions.	Anne Marie Castrovinci (BTRA)	08/07/20	06/30/21
2. Enhance Reporting Mechanisms for Bus Customer Complaints	BTRA will incorporate the key performance indicators as per Actionable Item #1 to the customer complaint data presented via BusStat to support timely closure of complaints. BTRA will submit three BusStat reports containing the new indicators.	Anne Marie Castrovinci (BTRA) Supporting Office: Scarlett Cook (PERF)	08/07/20	10/27/21
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the actionable item descriptions and performance measures.	QICO	10/27/21	11/20/20

**PERFORMANCE MEASURES**

None.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

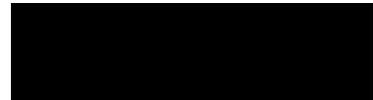
BTRA Anne Marie Castrovinci



(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

PERF Scarlett Cook



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Operations Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRA-20-04.

FINDING

Establishment of a formal operations quality control plan is essential to monitor and improve BTRA activities.

REQUIRED ACTION

QICO-BTRA-20-04

**Bus Transportation Operations (BTRA)**

[Risk: Moderate](#)



Develop a Quality Control Plan (QCP) to monitor established processes and promote continuous improvement.

*Measure: Documented Quality Management System Risk Category: Service Delivery 2,5*

ACTION PLAN OVERVIEW

BTRA and BOCC will develop a Quality Control Plan to monitor Bus Operator compliance to SOPs and appropriate steps for evaluating performance. Performance analysis shall include Annual Evaluation process, Mystery Rider Assessments, and various compliance assessments. BTRA staff will identify training standards based on results and opportunities for improving performance. The frequency and evaluation criteria shall be established in procedural format.

**Business Impact – Budget/Cost Estimate: Operating**

New/Expanded Initiative or Process – A new initiative needs to be created or a current process/procedure needs to be substantially expanded to address the Required Action(s). Additional resources will be required to address these initiatives.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Quality Control Plan (QCP) for Bus Operations	BTRA will develop and submit an operations QCP that establishes roles, responsibilities, defines types of checks, frequency of checks, feedback loop, associated checklists, overall compliance metrics, reporting method, and corrective actions.	Chaya Dowtin (BTRA) Supporting Office: Kevin Smith / Norman Williams (BOCC)	07/27/20	05/26/21
2. QCP Awareness	BTRA will provide awareness of the new QCP to all applicable personnel and submit a staff notice as evidence of awareness.	Sophia Green (BTRA)	05/26/21	07/28/21
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	07/28/21	09/24/21

**PERFORMANCE MEASURES**

None.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTRA Chaya Dowtin

(Signature/Date)

BTRA Sophia Green

(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BOCC Kevin Smith

(Signature/Date)

BOCC Norman Williams

(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRA Delores Proctor

(Signature/Date)

BUSV Robert Potts

(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRA-20-05.

FINDING

A process governing creation, closure and quality of incident/accident reports will increase accountability.

REQUIRED ACTION

QICO-BTRA-20-05

*Bus Transportation (BTRA)*

*Risk: Moderate*



Create and implement a procedure that details incident/accident data entry requirements and review process.

*Measure: Process Control Risk Category: Safety 2,5*

ACTION PLAN OVERVIEW

Bus Transportation (BTRA) will develop and implement standards for documenting incidents. BTRA will conduct audits to assess completeness and accuracy of incident data and institute corrective actions.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Bus Operator Records Management (BORMS) System Process	BTRA will develop and submit a documented process that establishes roles, responsibilities; process governing creation, closure and quality of incident documentation in the BORMS system.	George Sheppard (BTRA)	10/19/20	05/26/21
2. SMS Incident Process	BTRA will develop and submit a documented process governing creation, closure and quality of incidents in the SMS system.	Letroy Baker (BTRA) Supporting Office <sup>4</sup> : William Greene (BOCC)	08/07/20	08/25/21
3. BORMS & SMS Incident Process Awareness	BTRA will provide awareness of the BORMS & SMS Incident processes to all applicable personnel and submit staff notices as evidence of awareness.	Sophia Green (BTRA)	08/25/21	10/27/21
4. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	10/27/21	11/26/21

**PERFORMANCE MEASURES**

None.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



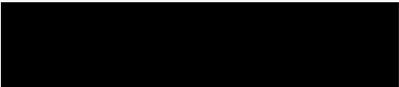
RESPONSIBLE PARTIES

BTRA	George Sheppard	
		(Signature/Date)
BTRA	Letroy Baker	
		(Signature/Date)
BTRA	Sophia Green	
		(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BOCC	William Greene	
		(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRA	Delores Proctor	
		(Signature/Date)
BUSV	Robert Potts	
		(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRA-20-06.

FINDING

A commercial driver's license verification process guarantees all Metrobus operators are properly licensed.

REQUIRED ACTION

QICO-BTRA-20-06

**Bus Transportation (BTRA)**

Risk: Moderate



Create and implement a commercial driver's license verification process that includes detailed procedures, audit plans, and reporting.

*Measure: Process Control Risk Category: Safety 2,5*

ACTION PLAN OVERVIEW

Bus Transportation (BTRA) will enhance the driver's license verification process and establish protocols for monitoring and reporting out on operator compliance with Commercial Driver's License (CDL) requirements.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. CDL Verification Process	BTRA will develop and submit a documented process for commercial driver's license (CDL) verification to include monitoring Operator's CDLs and frequency of recurring audits.	Jewel Bell (BTRA)	08/24/20	09/29/21
2. CDL Verification Implementation	BTRA will submit the results of the first three months audits as per Actionable Item #1.	Jewel Bell (BTRA)	09/29/21	01/12/22
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	01/12/22	02/18/22

PERFORMANCE MEASURES

None

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTRA Jewel Bell



(Signature/Date)

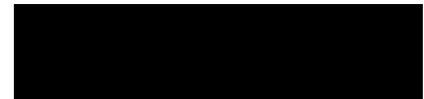
SECOND-LEVEL RESPONSIBILITY

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Operations Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRA-20-07.

FINDING

Tracking Maximo incidents to completion ensures proper handling and accountability.

REQUIRED ACTION

QICO-BTRA-20-07

- Bus Transportation Operations (BTRA)*
- Bus Maintenance (BMNT)*
- Bus Operations Communications Center (BOCC)*
- Bus Technology Systems Support (BTSS)*
- Office of IT, Systems, and Software (ITSS)*

*Risk: Low*



Develop and document a Maximo incident process that governs creation, modification, and closure of all incidents.

*Measure: Process Control      Risk Category: Service Delivery 1,5*

ACTION PLAN OVERVIEW

The Bus Operations Communications Center (BOCC), Bus Technology Systems Support (BTSS), and Office of IT, Systems, and Software (ITSS) will develop a process to close out incidents in the Computer Aided Dispatch system (CAD) and automatically update Maximo with the closure.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action. This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Maximo Incident Closure Process	BOCC, BTSS, and ITSS will develop and implement a process to close out Maximo incidents. BTSS will submit the process and incident query demonstrating implementation.	Michael Karpouzie (BTSS) Anna Manning (ITSS) Robert Harmon (BOCC) Supporting Roles <sup>4</sup> : Michael McFadden (BMNT)	07/27/20	07/28/21
2. Maximo Incident Closure Implementation	BTSS will submit three months of incident status reports after implementation as per Actionable Item # 1.	Michael Karpouzie (BTSS)	07/28/21	12/31/21
3. QICO CAP Verification Report	QICO will evaluate submitted actionable items to confirm that there is reasonable evidence that the finding and subsequent required action have been resolved, taking actionable item descriptions and performance measures into account.	QICO	1/2/22	2/28/22

**PERFORMANCE MEASURES**

BTSS to provide an incident query demonstrating evidence of 95% accurate work order status as per Actionable Item #2

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTSS	Michael Karpouzie	
		(Signature/Date)
ITSS	Anna Manning	
		(Signature/Date)
BOCC	Robert Harmon	
		(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BMNT	Michael McFadden	
		(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BMNT	Dave Michels	
		(Signature/Date)
BUSV	Robert Potts	
		(Signature/Date)

## **Bus Transportation Training & Administration (BTRN) iCAPAs**

Return to [Summary of Required Actions](#)



INTERNAL REVIEW

Service Delivery

In response to the Internal Review report regarding Metrobus Transportation Training & Administration (BTRN), the Office of Quality Assurance Internal Compliance & Oversight (QICO) has coordinated the development of five (5) iCAPAs. These iCAPAs have been developed to address the associated findings and required actions.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Joseph Leader



Joseph Leader  
Executive Vice President & Chief Operating Officer

Date

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Hakim Davis



Hakim Davis  
Vice President, Quality Assurance, Internal Compliance & Oversight (QICO)

Date

Eric L. Christensen



Eric Christensen  
Executive Vice President, Internal Compliance (INCP)

Date



8/26/20

Paul J. Wiedefeld  
General Manager & Chief Executive Officer (GM/CEO)

Date



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration (BTRN) Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRN-20-01.

FINDING

Development of documented departmental procedures is necessary for consistent and controlled training processes.

REQUIRED ACTION

QICO-BTRN-20-01

**Bus Transportation Training & Administration (BTRN)**

Risk: Elevated



Identify all core BTRN functions and develop associated processes and procedures.

*Measure: Process Control      Risk Category: Service Delivery 4,3*

ACTION PLAN OVERVIEW

Bus Training (BTRN) will identify all department processes and procedures. BTRN will define, roles, responsibilities and workflow processes for all BTRN staff. BTRN assigned staff will own and complete the written standard operating procedures (SOPs). BTRN will review all process forms and document and modify existing procedures. Each SOP will be created as a standalone document-controlled SOP. Evidence of awareness of new policies, procedures, and standards will be provided.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Create Master List for Processes and Procedures	BTRN will identify all processes and procedures including the assigned owners. BTRN will submit a master list of all identified processes and procedures.	Patricia Changcoco (BTRN)	06/17/20	11/18/20
2. Document Processes and Procedures	BTRN will draft and develop all identified BTRN processes and procedures as per Actionable Item #1. BTRN will submit the final and signed processes and procedures.	Patricia Changcoco (BTRN)	06/30/20	12/08/21
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	12/08/21	01/07/22

**PERFORMANCE MEASURES**

Evidence of signature acknowledgement that at least 95% of applicable active personnel received the new procedures as per Actionable Item #2.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTRN Patricia Changcoco



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRN Elmer Coppage



(Signature/Date)

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration (BTRN) Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRN-20-02.

FINDING

Accurate tracking of bus operator refresher training data will promote compliance with training requirements.

REQUIRED ACTION

QICO-BTRN-20-02

**Bus Transportation Training & Administration (BTRN)**

[Risk: Elevated](#)



Establish a process for monitoring, maintaining, and reporting operator training compliance.

*Measure: Non-Conformance Risk Category: Service Delivery 4,3*

ACTION PLAN OVERVIEW

BTRN will establish a process for monitoring, maintaining, and reporting compliance for the Two-Day Refresher Bus Operator class. This includes accurate tracking of the Two-Day Bus Operator Refresher training data. Divisions will receive a monthly list of eligible and required Operators to attend training.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Establish and Implement Refresher Class Process	BTRN will create a documented process for Operators to attend the Two-Day Refresher Class. The documented process will include, but not limited to tracking of training, divisional responsibilities, report outs, and quality control procedures. BTRN will submit the refresher class documented process.	Taylor Griffin (BTRN) Supporting Office: Sophia Green (BTRA)	07/22/20	04/28/21
2. Two-Day Refresher Class Implementation	BTRN will submit three months of refresher training status report as per Actionable Item #1.	Taylor Griffin (BTRN)	04/28/21	08/18/21
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the actionable item descriptions and performance measures.	QICO	08/18/21	09/24/21

**PERFORMANCE MEASURES**

None

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

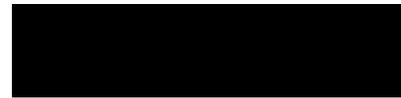
BTRN Taylor Griffin



(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BTRA Sophia Green



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRN Elmer Coppage



(Signature/Date)

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration (BTRN) Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRN-20-03.

FINDING

Addressing the root cause of infractions is an effective approach to remedial training.

REQUIRED ACTION

QICO-BTRN-20-03

***Bus Transportation Training & Administration (BTRN)***

[Risk: Elevated](#)



Revise the remedial training program to target the root cause of operator infractions.

*Measure: Training Risk Category: Service Delivery 4,3*



BTRN will create a targeted intervention that addresses the specifics of the incident. The course will provide Bus Operators, Fleet Servicers, and Mechanics involved in both preventable and non-preventable incidents a one-day opportunity to reflect on their operations and receive feedback regarding their incident(s) from Training Instructors within 30 days from date of the incident. The course will heighten course participants' awareness of the Standard Operating Procedure (SOP) violations that occurred during the incident. It will also include an on-board practicum, which allows course participants to practice the skills they failed to demonstrate during their incident. The intended long-term impact of the course is to reduce bus incidents and improve safety, thereby improving key performance indicators and overall bus performance.

This course builds upon the One-Day Bus Operator Remedial Course. Employees involved in a more severe combination of incidents attend the second day to receive additional emphasis on incident prevention. This course will also use applicable WMATA incident data, DriveCam, CCTV, and/or Operator incident reports to reduce bus incidents and improve safety.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items		Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1.	Design Plan	BTRN will create a design plan for the one-day and two-day Remedial Class. BTRN will submit the design plan.	Patricia Changcoco (BTRN)	06/22/20	08/19/20
2.	Develop Curriculum	BTRN will develop a targeted curriculum to reduce bus incidents and improve safety. This curriculum will include working with the specific individual on incident findings. BTRN will submit the curriculum package.	Patricia Changcoco (BTRN) Supporting Office: Donald Brown (BOCC)	06/22/20	04/21/21
3.	Plan Implementation	BTRN will submit three months of remedial course attendance records as per Actionable Item #2.	Patricia Changcoco (BTRN) Supporting Office: Donald Brown (BOCC)	04/21/21	08/18/21
4.	QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, considering the actionable item descriptions and performance measures.	QICO	08/18/21	09/24/21

**PERFORMANCE MEASURES**

None

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTRN Patricia Changcoco



(Signature/Date)

SUPPORTING ROLE ACKNOWLEDGEMENT

BOCC Donald Brown



(Signature/Date)

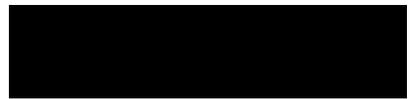
SECOND-LEVEL RESPONSIBILITY

BTRN Elmer Coppage



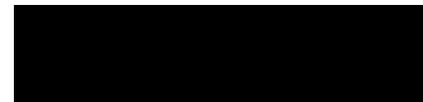
(Signature/Date)

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration (BTRN) Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated findings and required action for QICO-BTRN-20-04.

FINDINGS

F-BTRN-20-04: Current and controlled policies, procedures, and standards provide clear direction and result in more consistent processes.

F-BTRN-20-06: Current and controlled training materials are essential for consistent training processes.

REQUIRED ACTION

QICO-BTRN-20-04

**Bus Transportation Training & Administration (BTRN)**

Risk: Moderate



Adhere to BUSV's existing document control policy and remove or revise outdated and superseded documents.

*Measure: Document Control Risk Category: Service Delivery 2,5*

ACTION PLAN OVERVIEW

BTRA and BTRN will review, update, and archive outdated and superseded governing documents on the BTRA homepage. Processes, procedures, and workflow will be documented, including a distribution procedure for governing documents to Bus Managers, Bus Operators, Street Supervisors, BMNT Supervisors, and Mechanics. Documents will be updated and revised every two years.

**Business Impact – Budget/Cost Estimate:**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Review and Update Master Document Log	BTRN will review and maintain a master document log. The log will be used to manage documents requiring archiving, updating and revising. BTRN will submit a master document log.	Kerone Jeanniton-Georges (BTRN)	07/01/20	09/02/20
2. Update the Intranet	BTRN will remove all outdated and/or superseded governing documents to the Intranet, as well as add new documents as applicable. BTRN will submit evidence that outdated and superseded documents were removed, and new documents were added to the Intranet.	Anthony Dawson (BTRN)	06/30/20	09/09/20
3. Develop Process to Update/Distribute Governing Documents	BTRN will create and submit a documented process for updating/distributing governing documents to applicable personnel.	Kerone Jeanniton-Georges (BTRN)	06/30/20	09/09/20
4. Division Manual	BTRA will revise and submit the Division Manual that reflects updated standards, updated processes and procedures.	Chaya Dowtin (BTRA)	08/07/20	02/24/21
5. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	02/24/21	03/26/21

**PERFORMANCE MEASURES**

None

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTRN Kerone Jeanniton-Georges



(Signature/Date)

BTRN Anthony Dawson



(Signature/Date)

BTRA Chaya Downtin



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRN Elmer Coppinge



(Signature/Date)

BTRA Delores Proctor



(Signature/Date)

BUSV Robert Potts



(Signature/Date)



PURPOSE AND SCOPE

On June 12, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Bus Transportation Training & Administration (BTRN) Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated finding and required action for QICO-BTRN-20-05.

FINDING

Establishment of a formal quality control plan is essential for monitoring and improving BTRN activities.

REQUIRED ACTION

QICO-BTRN-20-05

**Bus Transportation Training & Administration (BTRN)**

[Risk: Moderate](#)



Develop and implement a documented Quality Control Plan (QCP) to promote consistent department performance.

*Measure: Documented Quality Management System Risk Category: Service Delivery 4,2*

ACTION PLAN OVERVIEW

BTRN will create a comprehensive Quality Control Plan. BTRN will define the process for BTRN Staff. BTRN Staff will implement the Quality Control Plan.

**Business Impact – Budget/Cost Estimate:**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s).

This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Develop BTRN Quality Control Plan (QCP)	BTRN will develop and submit a comprehensive quality control plan that establishes roles, responsibilities, evaluations, monitoring process, key metrics, reporting process, and corrective actions. This plan will include the incorporation of external inputs.	Marcia Siler (BTRN)	07/13/20	01/27/21
2. QCP Implementation	BTRN will submit three months of QCP reports as per Actionable Item #1.	Marcia Siler (BTRN)	01/27/21	05/12/21
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	05/12/21	06/18/21

**PERFORMANCE MEASURES**

None

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

BTRN

Marcia Siler



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

BTRN

Elmer Coppage



(Signature/Date)

BTRA

Delores Proctor



(Signature/Date)

BUSV

Robert Potts



(Signature/Date)

## **Rail Planning & Scheduling (RPLN) iCAPAs**

Return to [Summary of Required Actions](#)



INTERNAL REVIEW

Service Delivery & Internal Safety Review

In response to the Internal Review and Internal Safety Review reports regarding Rail Planning & Scheduling (RPLN), the Office of Quality Assurance Internal Compliance & Oversight (QICO) has coordinated the development of two (2) iCAPAs. These iCAPAs have been developed to address the associated findings and required actions.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Joseph Leader



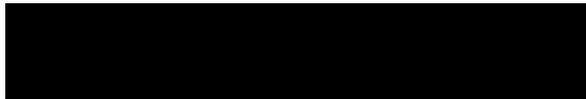
Joseph Leader  
Executive Vice President & Chief Operating Officer

Date

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Hakim Davis



Hakim Davis  
Vice President, Quality Assurance, Internal Compliance & Oversight (QICO)

Date

Eric L. Christensen



Eric Christensen  
Executive Vice President, Internal Compliance (INCP)

Date



8/25/20

Paul J. Wiedefeld  
General Manager & Chief Executive Officer (GM/CEO)

Date



PURPOSE AND SCOPE

On July 17, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Rail Planning and Scheduling Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated findings and required actions for QICO-RPLN-20-01.

FINDINGS

Development of documented departmental procedures is necessary for consistent and controlled processes.

Development of documented departmental procedures is necessary for consistent safety oversight within all processes.

REQUIRED ACTIONS

QICO-RPLN-20-01

**Rail Planning and Scheduling (RPLN)**

[Risk: Elevated](#)



- Develop a process or procedure for each of RPLN's core functions.
- Develop a departmental quality control plan in accordance with established WMATA quality requirements.
- Develop a departmental document control procedure.
- Establish a policy that outlines the requirements for secured document storage, retention, and archiving.

*Measure: Process Control      Risk Category: Service Delivery 4,3*

ACTION PLAN OVERVIEW

QICO-RPLN-20-01 will be closed upon implementation of the RPLN departmental Quality Management Plan (QMP). This initiative will address findings surrounding establishment of departmental processes/procedures, quality control plan, document control, and document retention.

**Business Impact – Budget/Cost Estimate: Operating**

New/Expanded Initiative or Process – A new initiative needs to be created or a current process/procedure needs to be substantially expanded to address the Required Action(s). Additional resources will be required to address these initiatives.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Core-Function Processes and Procedures	RPLN will develop and submit all core-function departmental processes and procedures.	Heather Ferguson (RPLN)	08/17/20	04/07/21
2. Document Control Process	RPLN will develop and submit a document control process, inclusive of a comprehensive document control, reviews, storage, retention, and archiving.	Heather Ferguson (RPLN)	08/17/20	04/07/21
3. Quality Control Plan	RPLN will develop and submit a comprehensive quality control plan that establishes roles, responsibilities, evaluations, monitoring process, key metrics, reporting process, and corrective actions.	Heather Ferguson (RPLN)	08/17/21	04/07/21
4. Quality Control Plan Implementation	RPLN will provide three months of reporting to include corrective actions, if any, as per Actionable Item #3.	Heather Ferguson (RPLN)	04/07/21	08/18/21
5. QICO CAP Verification Report	QICO shall evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	08/18/21	09/15/21

**PERFORMANCE MEASURES**

Evidence of signature acknowledgement that at least 95% of applicable and active employees received the new processes and procedures as per Actionable Items #1 & #2.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

RPLN Heather Ferguson



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

IPLN Peter Cafiero



(Signature/Date)

OBPP Andrea Burnside



(Signature/Date)



PURPOSE AND SCOPE

On July 17, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Rail Planning and Scheduling Internal Review report. This internal Corrective and Preventive Action (iCAPA) report is developed to address associated findings and required action for QICO-RPLN-20-02.

FINDINGS

A documented training matrix for all job positions provides assurance that all personnel are adequately qualified to perform their assigned work.

A documented training matrix, including required departmental safety training, is essential for personnel to incorporate safe practices within their assigned work.

REQUIRED ACTION

QICO-RPLN-20-02

*Rail Planning and Scheduling (RPLN)*

[Risk: Moderate](#)



Create a training matrix that identifies all required training for each position within RPLN.

*Measure: Training Risk Category: Service Delivery 3,3*

ACTION PLAN OVERVIEW

Rail Planning and Scheduling (RPLN) shall develop a departmental training matrix, to include required safety training, for each job position in compliance with Authority policies. This iCAPA addresses findings FQ-RPLN-20-04 and FS-RPLN-20-02, identified on the 2020 Rail Planning & Scheduling Internal Review and Internal Safety Review.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s).

This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Develop a Training Matrix	RPLN will develop and submit a training matrix which identifies staff training needs by job description, responsibilities, expected outcomes, and workflow processes for all RPLN personnel.	Heather Ferguson (RPLN)	08/17/20	04/07/21
2. QICO CAP Verification Report	QICO shall evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	QICO	04/07/21	05/05/21

**PERFORMANCE MEASURES**

None

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



RESPONSIBLE PARTIES

RPLN Heather Ferguson



(Signature/Date)

SECOND-LEVEL RESPONSIBILITY

IPLN Peter Cafiero



(Signature/Date)

OBPP Andrea Burnside



(Signature/Date)

## **Low Voltage Electrical Maintenance (LVEM) iCAPAs**

Return to [Summary of Required Actions](#)



INTERNAL REVIEW

Internal Safety Review

In response to the Internal Safety Review report regarding the Department of Low Voltage Electrical Maintenance (LVEM), the Office of Quality Assurance Internal Compliance & Oversight (QICO) has coordinated the development of three (3) iCAPAs. These iCAPAs have been developed to address the associated findings and required actions.

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Joseph Leader



Joseph Leader  
Executive Vice President & Chief Operating Officer

Date

EXECUTIVE LEADERSHIP OF RESPONSIBLE PARTIES

Internal Corrective and Preventive Action (iCAPA) Commitment

Hakim Davis



Hakim Davis  
Vice President, Quality Assurance, Internal Compliance & Oversight (QICO)

Date

Eric L. Christensen



Eric Christensen  
Executive Vice President, Internal Compliance (INCP)

Date

8/26/20

Paul J. Wiedefeld  
General Manager & Chief Executive Officer (GM/CEO)

Date



**PURPOSE AND SCOPE**

On June 25, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Department of Low Voltage Electrical Maintenance (LVEM) Internal Safety Review (ISR) report. This internal Corrective and Preventive Action (iCAPA) is developed to address associated findings and required action for **QICO-LVEM-20-01**.

**FINDINGS**

F-LVEM-20-01: Complying with required Personal Protective Equipment (PPE) reduces risks associated with occupational tasks.

F-LVEM-20-02: Conducting required Job Safety Briefings enhances compliance with safety requirements, improves controls for risks, and incorporates utilization of hazard identification and mitigation.

F-LVEM-20-03: Utilization of documented Preventive Maintenance Instructions (PMI) before and during the performance of the PMIs promotes preparation and ensures the use of approved and pertinent equipment and tools.

F-LVEM-20-04: Reviewing and updating documented PMIs in accordance with the required periodicity promotes efficiency and safety.

F-LVEM-20-07: Complying with the Systems Maintenance (SMNT) Maintenance Control Policy (MCP) Quality Control program promotes a culture of safety and the effective implementation of rules and procedures.

**REQUIRED ACTION**

**QICO-LVEM-20-01**

**Department of Low Voltage Electrical Maintenance (LVEM)**

*Risk: High*



Management oversight plan must reinforce the frequency and accuracy of compliance checks for job safety briefings and confirm that appropriate PPE, tools, and equipment are in place at the job site.

*Measure: Management Responsibility Risk Category: Safety 4,5*

**ACTION PLAN OVERVIEW**

Low Voltage Electrical Maintenance (LVEM) will revise the Preventive Maintenance Instructions (PMI) to update the usage of Personal Protective Equipment (PPE), wiring diagrams, tools and equipment while on site. In addition, LVEM will develop a management oversight plan to verify the frequency and accuracy of Level I and Level II compliance checks. During the Safety Committee Meeting LVEM will address, reinforce and document the requirement of Safety Briefings.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s).

This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Update PMIs	LVEM will update and submit outdated PMIs to include LVEMs work practices including but not limited to PPE, wiring diagrams, tools and equipment used during a PMI.	<b>Barrett Johnson (LVEM)</b>	07/31/20	01/27/21
2. Safety Briefings	LVEM will address, reinforce, and document the requirement of Safety Briefings in safety committee meetings with LVEM personnel. LVEM will provide Safety Committee Meeting Minutes and sign-in sheets.	<b>Barrett Johnson (LVEM)</b>	07/10/20	09/16/20
3. Level I and II Checks	LVEM will develop and submit a management oversight plan to verify the frequency and accuracy of Level I and Level II compliance checks.	<b>Barrett Johnson (LVEM)</b>	07/31/20	10/07/20
4. Management Plan Implementation	LVEM will submit three quarters of compliance checks as per Actionable Item #s 2 and 3.	<b>Barrett Johnson (LVEM)</b>	10/08/20	08/18/21
5. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	<b>QICO</b>	08/23/21	09/24/21

**PERFORMANCE MEASURES**

Evidence of signature acknowledgement that at least 95% of active personnel received the updated PMIs as per Actionable Item #3.

LVEM to provide three months of sign-in sheets as per Actionable Item #2.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



**RESPONSIBLE PARTIES**

LVEM                  Barrett Johnson



(Signature/Date)

**SECOND-LEVEL RESPONSIBILITY**

SMNT                  Uniquea Butts



(Signature/Date)

FSVT                  Rodolfo Bitar



(Signature/Date)



**PURPOSE AND SCOPE** On June 25, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Department of Low Voltage Electrical Maintenance (LVEM) Internal Safety Review (ISR) report. This internal Corrective and Preventive Action (iCAPA) is developed to address associated finding and required action for **QICO-LVEM-20-02**.

**FINDING** F-LVEM-20-05: Establishing a documented process for the entire Maximo Work Order lifecycle promotes traceability and accountability.

<b>REQUIRED ACTION</b>	QICO-LVEM-20-02.	<i>Department of Low Voltage Electrical Maintenance (LVEM)</i>	<u><i>Risk: Low</i></u>	
	Develop and update current policies and procedures in accordance with the Systems Maintenance (SMNT) Maintenance Control Policy (MCP) standard. <i>Measure: Document Quality Management System      Risk Category: Safety 2,2</i>			

**ACTION PLAN OVERVIEW** LVEM will revise, update and standardize LVEM Maximo work order lifecycle process to incorporate work order traceability. LVEM will also work with a Maximo subject matter expert (SME) to manage the Work Orders for LVEM in Maximo.

**Business Impact – Budget/Cost Estimate: Operating**  
 Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Standardize Maximo Lifecycle Process	Revise, update, standardize, and document LVEM Maximo work order lifecycle process to incorporate work order traceability in accordance with the SMNT MCP standard LVEM will submit the Maximo work order lifecycle process.	<b>Barrett Johnson (LVEM)</b>	07/13/20	01/13/21
2. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	<b>QICO</b>	01/15/21	02/19/21

**PERFORMANCE MEASURES**

Evidence of signature acknowledgement that at least 95% of active personnel to indicate awareness of the new Maximo work process standard as per Actionable Item #1.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



**RESPONSIBLE PARTIES**

LVEM

Barrett Johnson

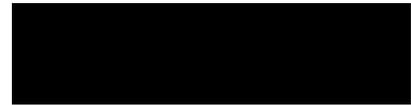


(Signature/Date)

**SECOND-LEVEL RESPONSIBILITY**

SMNT

Uniquea Butts



(Signature/Date)

FSVT

Rodolfo Bitar



(Signature/Date)



**PURPOSE AND SCOPE**

On June 25, 2020, the Office of Quality Assurance, Internal Compliance & Oversight (QICO) issued the Department of Low Voltage Electrical Maintenance (LVEM) Internal Safety Review (ISR) report. This internal Corrective and Preventive Action (iCAPA) is developed to address associated finding and required action for **QICO-LVEM-20-03**.

**FINDING**

F-LVEM-20-06: Adherence to WMATA and OSHA training requirements promotes compliance and minimizes risks associated with workplace hazards.

**REQUIRED ACTION**

**QICO-LVEM-20-03.**

*Department of Low Voltage Electrical Maintenance (LVEM)*

*Risk: Elevated*



Establish and implement a documented training program that encompasses all training requirements for LVEM personnel.

*Measure: Training and Certification Program for Employees and Contractors Risk Category: Safety 4,4*

**ACTION PLAN OVERVIEW**

Revise Training Matrix to include all LVEM training requirements and ensure all active employees complete the required training. LVEM will also ensure training completion of all active 5027 AA Mechanics and 5036 Supervisors to meet the requirements of a Qualified Person.

**Business Impact – Budget/Cost Estimate: Operating**

Process Improvement – A current process/procedure needs to be optimized to address the Required Action(s). This type of initiative does not need additional resources because current manpower will be used to improve the process.



Actionable Items	Description	Responsible Party <sup>1</sup>	Est Start <sup>2</sup>	Est End <sup>3</sup>
1. Revise Training Matrix	LVEM will revise and submit training matrix to include LVEM training requirements.	<b>Barrett Johnson LVEM</b>	08/03/20	12/31/20
2. LVEM Required Training	Completion of required training by all active LVEM personnel as prescribed by Actionable Item #1. LVEM will submit On-the-Job Training (OJT) records through ELM for all active LVEM personnel.	<b>Barrett Johnson LVEM</b>	01/01/21	01/03/22
3. 5027 AA Mechanics & 5036 Supervisor Training	Completion of required training by all active 5027 AA Mechanics and 5036 Supervisors to meet the requirements of a Qualified Person. LVEM will submit OJT records through ELM for 5027 AA Mechanics and 5036 Supervisors.	<b>Barrett Johnson LVEM</b>	01/01/21	01/03/22
3. QICO CAP Verification Report	QICO will evaluate actionable items submitted to confirm there is reasonable evidence that the findings and this required action have been resolved, taking into account the actionable item descriptions and performance measures.	<b>QICO</b>	02/07/22	03/07/22

**PERFORMANCE MEASURES**

Evidence of signature acknowledgement that at least 95% of active personnel received the required training as per Actionable Items #2 & #3.

<sup>1</sup> In the event of personnel or departmental changes, responsibilities for actionable items shall transfer to the new leadership.

<sup>2</sup> Est Start – Estimated Start Date.

<sup>3</sup> Est End – Estimated Completion Date.

<sup>4</sup> Offices designated as supporting roles provide subject matter expertise to responsible parties during action development and are not directly responsible for delivery of actionable items listed above.



**RESPONSIBLE PARTIES**

LVEM                  Barrett Johnson



(Signature/Date)

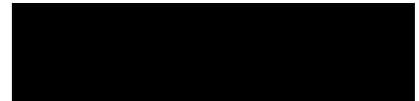
**SECOND-LEVEL RESPONSIBILITY**

SMNT                  Uniquea Butts



(Signature/Date)

FSVT                  Rodolfo Bitar



(Signature/Date)

# **SUPPLEMENTAL MATERIALS**

## APPENDIX A: THE 15 CORE QMS STANDARDS PER THE QUALITY MANAGEMENT SYSTEM PLAN

1. **Management Responsibilities:** *Commitment of senior management to implement, maintain, and continually improve upon WMATA's Quality Management System*
  2. **Document Quality Management System:** *The combined set of quality documents, including a Quality Management System Plan, subordinate Quality Management Plans, Policies & Procedures, Work Instructions, Forms, etc.*
  3. **Design Control:** *Processes to ensure the consistent development and maintenance of quality design documentation for projects and assets based on requirements, standards, criteria, etc.*
  4. **Document Control:** *Managing information to ensure the most current approved documents are used*
  5. **Purchasing:** *Providing for timely procurement of the right items/assets and services required for proper performance*
  6. **Identification & Traceability of Assets & Materials:** *The ability to track the unique history, location performance, and configuration of any asset over its lifecycle*
  7. **Process Control:** *Management and documentation of inter-related resources and activities to turn inputs into outputs/outcomes*
  8. **Inspection, Testing & Status:** *Verification and documentation that practices, processes, assets, and materials comply with applicable procedures, specification, etc. and are fit for service*
  9. **Inspection, Measuring & Test Equipment:** *Identification and periodic testing and calibration of measuring and test equipment to assure readiness for use*
  10. **Non-Conformance:** *Systematic tracking of work performed or material that does not meet procedures, specs, contract requirements, etc.*
  11. **Corrective & Preventive Actions:** *Measures taken to modify processes/procedures to correct and prevent recurrence of non-conformances and failures*
  12. **Quality Records:** *Documents generated by Quality functions that provide objective evidence of fulfillment of requirements*
  13. **Internal Reviews & Quality Assessments:** *Independent, objective review of conformance to quality standards and/or the overall effectiveness of processes in delivering acceptable levels of quality*
  14. **Training:** *Providing skills and knowledge required for staff to successfully perform a job*
  15. **Customer Focus:** *Proactively addressing the needs and wants of internal and external customers, always*
-

## APPENDIX B: SAFETY REVIEW SYSTEM SAFETY MEASURES

### Policies, Procedures & Standards (SSPP Elements 1-5, 12, 13, 15 & 17)

- **Safe Work Standards:** The existence and effectiveness of department policies, procedures, manuals, work instructions, safety and security practices, and other safety and security requirements that define department safe work practices.
- **Work Measurement:** The existence and effectiveness of operational safety goals and sound management routines to achieve these goals.
- **Configuration Management:** The existence and effectiveness of processes, tools, and techniques to manage changes to a system to achieve intended outcomes.
- **Safety Management:** The existence and effectiveness of supervision strategy to ensure personnel are adequately equipped to perform work safely and qualified to perform work to standard.

### Training, Certification & Compliance (SSPP Elements 16, 18, 20 & 21)

- **Application & Fulfillment:** Adherence to existing/adopted policies, procedures, and standards; including applicable engineering or other technical requirements that specify material and/or workmanship standards.
- **Job Safety:** Adherence to safety requirements, including enterprise-wide standards (e.g. MSRPH) or those specific to a particular type of work (e.g. PPE).
- **Safety Training & Certification:** The existence and effectiveness of a training strategy to ensure personnel are adequately qualified to perform work.
- **Regulations & Oversight:** Adherence to requirements, guidelines, and recommendations from external/regulatory authorities and internal oversight functions, including items issued for corrective and preventive actions.

### Hazard Management (SSPP Elements 6, 10, 11 & 19)

- **Data Assurance:** Assessing the existence of a hazardous condition that has been identified.
- **Assets and Activities:** The performance of gathering all data, conducting interviews & field inspections to determine the risk level and prioritize hazardous conditions and focus available resources on the most serious hazards requiring resolution.
- **Document Control:** Assessing the effectiveness of hazard tracking and documentation of all systems to mitigate and prevent reoccurrence.

### Safety (SSPP Elements 7, 8, 9 & 14)

- **Managing Safety in System Modification:** Evaluating and assuring that a proposed modification does not adversely affect the system, vehicle, equipment or facility previously certified under the System Safety & Security process.
- **Emergency Management:** Assessing the management of operational emergencies and preparedness to maintain and continue safe operation under such conditions.
- **Occupational Safety & Health:** Validating the development of Safety programs and the administration of training to required personnel to assure safe and healthful working conditions for employees and contractors.

## APPENDIX C: RISK ASSESSMENT

### Risk Assessment Methodology

Risk is defined as an uncertain event or condition that, if it occurs, has a positive or negative effect on the organization's objectives and operations (both threats and opportunities). It is assessed on the combination of the probability of occurrence of risk and the severity of the risk. Risk management is an attempt to answer the following questions:

- What can go wrong? – The Risk
- How often does/will it happen? – The Probability of Occurrence
- How bad are the consequences? – The Impact
- Is the risk acceptable? – The Risk Treatment, Remediation

### Categories of Risk

- **Service Delivery** – A broad range of risks with direct or indirect impact on daily transit and/or business operations. The risk of direct or indirect losses or other negative effects due to inadequate or failed internal business or transit operations, or from external events that impair internal processes, people, or systems.
- **Financial** – The risk to achievement of the Authority's mission arising from an inability to manage credit, debt and financial leverage, and other financial resources. Financial risk would also include risk arising from adverse movements in market rates or the Authority's inability to meet its obligations.
- **Legal & Compliance** – Risks arising from a failure to comply with applicable laws and regulations and a failure to detect and report activities that are not compliant with statutory, regulatory, or internal policy requirements. Failure to comply with prescribed guidelines and established practices. This would also include a lack of awareness or ignorance of the relevant standards, guidelines or regulations.
- **Safety** – The risk of achievement of the Authority's mission arising from failures to prevent hazards that may cause harm to human, equipment, or the environment. This would also include risk arising from the Authority's inability to comply with safety-related legal or regulatory standards.
- **Strategic** – Risks arising from failure to achieve strategic or tactical objectives, an adverse business decision, or a lack of strategic direction and leadership. This would also include the ineffective implementation of the strategic plans, a lack of business strategies developed to achieve goals, and inadequate resources deployed against the achievement of those goals. Strategic risks can be affected by changes in the political environment such as changes in administration and resulting changes in strategic priorities. Strategic risks can also be triggered by actions of key stakeholders such as the Tri-Jurisdictional law makers or the Federal Transit Administration (FTA).
- **Technology** – The risk of unexpected losses from inadequate systems, breaches in information technology security, and inadequate business continuity planning. This would also include risks to the achievement of the Authority's mission arising from the inability of networks, security, and technologies to meet Metro's evolving needs.
- **Reputation** – The risk to the achievement of the Authority's mission arising from negative internal or external stakeholder opinion. Reputation risk affects the Authority's ability to establish new and/or sustain existing relationships.

### Risk Assessment Process

The following risk matrix is used to assess risks within the universe of review areas. The universe (see Table 1) is comprised of the potential range of all review activities and review business units (or departments) that fall within QICO's scope and oversight authority. These business units consist of programs, processes, assets and people which together contribute to the fulfilment of the departments' strategic goals (Goal 1 - Build Safety Culture; Goal 2 - Deliver Quality Service; Goal 3 - Improve Regional Mobility; and Goal 4 - Ensure Fiscal Stability).

Risks are assessed based on the significance of their impact (see horizontal axis in Figure 1) and the probability of occurrence (see vertical axis in Figure 1). The probability ratings are rated on a scale of 1 (minimum) to 5 (maximum) and are driven by the metrics shown on the next page. The impacts ratings are also rated on a scale of 1 (minimum) to 5 (maximum) and are driven by the category of risks, which are then aligned on the metrics shown on the next page.

Each finding is given a severity rating of Insignificant, Low, Moderate, Elevated or High. All areas with Elevated/High ratings are considered to be high risk to the organization's objectives; and need to be mitigated/reduced in severity at the earliest. The risk ratings to the findings are provided as "Type of Risk" followed by "Severity Rating (Impact, Probability)" (e.g. a finding with "Elevated (4,3)" would mean a 'significant (4)' impact along with a 'possible (3)' probability of occurrence).

## APPENDIX C: RISK ASSESSMENT

### Risk Assessment Matrix

<b>Almost Certain (5)</b>	<b>Probability of Occurrence</b>	<b>Low</b>	<b>Moderate</b>	<b>Elevated</b>	<b>High</b>	<b>High</b>
<b>Likely (4)</b>		<b>Low</b>	<b>Low</b>	<b>Moderate</b>	<b>Elevated</b>	<b>High</b>
<b>Possible (3)</b>		<b>Low</b>	<b>Low</b>	<b>Moderate</b>	<b>Elevated</b>	<b>Elevated</b>
<b>Unlikely (2)</b>		<b>Insignificant</b>	<b>Low</b>	<b>Low</b>	<b>Moderate</b>	<b>Moderate</b>
<b>Rare (1)</b>		<b>Insignificant</b>	<b>Insignificant</b>	<b>Low</b>	<b>Moderate</b>	<b>Moderate</b>
<b>Probability</b>		<b>Potential Impact of Risk</b>				
<b>Impact</b>	<b>Negligible (1)</b>	<b>Minor (2)</b>	<b>Moderate (3)</b>	<b>Significant (4)</b>	<b>Major (5)</b>	

### Risk Scale Definitions

<b>Insignificant</b>	Reasonable assumption that this risk will not occur and unlikely to cause the activity to fail to meet part of its objective.
<b>Low</b>	Reasonable assumption that this risk will likely not occur & may cause a failure of the business process to meet part of its objectives.
<b>Moderate</b>	Reasonable assumption that this risk may occur & may cause a failure of the business process to meet a significant part of its objectives.
<b>Elevated</b>	Reasonable assumption that this risk will likely occur & likely to cause a failure of the business process to meet a significant part of its objectives.
<b>High</b>	Reasonable assumption that this will occur & will cause a failure of the business process to meet its objectives or cause objective failure in other activities.

### Potential Impact

- (1) **Negligible** – Unlikely to cause the activity to fail to meet part of its objectives.
- (2) **Minor** – May cause a failure of the business process to meet part of its objectives, which may expose Metro to minor financial losses, less- effective or efficient operations, some non- compliance with laws and regulations, waste of resources, etc.
- (3) **Moderate** – May cause a failure of the business process to meet a significant part of its objectives, or negatively impact the objectives of other activities, which may expose Metro to moderate financial losses, reductions to or ineffectiveness of operations, non- compliance with laws and regulations, sizable waste of resources, etc.
- (4) **Significant** – Likely to cause a failure of the business process to meet a significant part of its objectives, or negatively impact the objectives of other activities, which may expose Metro to significant financial losses, reductions to or ineffectiveness of operations, non- compliance with laws and regulations, sizable waste of resources, etc.
- (5) **Major** – Will cause a failure of the business process to meet its objectives, or cause objective failure in other activities, which may cause or expose Metro to major financial losses, interruptions in operations, failure to comply with laws and regulations, major waste of resources, failure to achieve stated goals, etc.

### Probability of Occurrence

- |   |   |
|---|---|
| (1) Rare – Reasonable assumption that this risk will not occur            | (4) Likely – Reasonable assumption that this risk will likely occur |
| (2) Unlikely – Reasonable assumption that this risk will likely not occur | (5) Almost Certain – Reasonable assumption that this will occur     |
| (3) Possible – Reasonable assumption that this risk may occur             |   |

## APPENDIX D: TECHNICAL TERMINOLOGY

### DESCRIPTION

- **BOCC Specialist:** A WMATA employee within BOCC that monitors and manages buses and non-revenue vehicles from the Bus Operations Communication Center. They distribute pertinent information to the appropriate individuals who respond and act upon the information received.
- **Bus Division:** A facility in which WMATA stores and services buses on a regular basis. This includes mechanical repairs, cleaning, fueling, and dispatching buses on routes.
- **Bus ETA:** Provides an enhanced user experience for customers using an open-source arrival-prediction algorithm that is quickly becoming a standard in the transit industry. BusETA features include real-time bus arrival information.
- **CleverCAD:** A software suite that enables dispatchers to communicate directly with vehicles and effectively manages routes. It delivers greater efficiency and security to transit operations by providing BOCC specialists and transit field supervisors with a clear, real-time location and status of every GPS-tracked vehicle. CleverCAD also provides route information and a bus communication tools that allow response to service disruptions in real-time.
- **Clever Device:** Serves as the on-board vehicle computer and provides a fully automated solution that includes a single point of logon for all system components, control of the exterior destination sign, control of the interior sign, audible destination announcements, and real-time fleet monitoring.
- **DriveCam:** On-board video/audio recording device that is activated when turning or braking forces exceed a programmed threshold. The moments leading up to and just after an event are recorded and utilized in incident/accident investigations and general operator coaching.
- **HASTUS:** A modular software system used for the scheduling of transit services. Internal rules are set to manage run times, train headways, and compliance with WMATA's Hours of Service policy and Local Collective Bargaining Agreements (CBA) regarding operator's allowable duty hours.
- **Incident:** An event or occurrence notable enough to be recorded.
- **Infraction:** A violation or infringement of a policy, procedure, law, or agreement.
- **Mystery Rider Evaluation:** An evaluation of a bus operator's performance conducted by a TFS in plain clothes without notifying the operator.
- **Peoplesoft Enterprise Learning Management (ELM):** An integrated application that takes information from other Peoplesoft applications to create specific, targeted learning objectives and consolidate all learning management and tracking.
- **Quality Control Plan (QCP):** Ensures that an organization, product or service is consistent. It has four main components: quality planning, quality assurance, quality control and quality improvement. Quality control is focused not only on product and service quality, but also on the means to achieve it.
- **Qualified Person:** A qualified person is someone who has taken OSHA 29 CFR 1910.269, electrical safety training and CPR.
- **RailStat:** Bi-monthly report of rail transportation statistics, including performance, schedule, accident, safety and budgetary data. Created by an inter-departmental meeting of all groups involved with rail services.
- **Revenue Service:** The scheduled operation of a bus or train along a planned route picking up customers and collecting revenue.
- **Root Cause Analysis:** A method of problem solving used for identifying the root causes of faults or problems.
- **RSA - Rail Schedule Adjustments.** Changes to the rail schedules are requested for increased/ decreased ridership expectations due to Holidays, events, or special conditions (COVID-19).
- **Wayside Work Planning (WWPL):** This WMATA Department supports infrastructure work planning and coordination by:
  - o Planning the major work windows with significant customer impacts,
  - o Revising processes to improve the efficiency of track access and utilization,
  - o Supporting planning and prioritization of capital replacement projects.
- WWPL submits RSA requests to RPLN to initiate schedules to support track maintenance vehicle movements as well as any required single tracking for revenue vehicles.

---

**DESCRIPTION**

---

- **Standard Operating Procedure (SOP):** Standard Operating Procedures (SOPs) delineate responsibilities and procedures for performing certain Metrobus functions.
  - **Transit Field Supervisor (TFS):** A WMATA employee within BTRA that monitors and manages buses and operators from in the field. They also receive information from BOCC Specialists and respond to incidents upon the information received.
-