



Safety and Operations Committee

Board Information Item III-B

February 10, 2022

Safety Risk Management – Path Forward

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:
202340

Resolution:
☐ Yes ☒ No

TITLE:

Metro Safety Risk Management: Path Forward

PRESENTATION SUMMARY:

This presentation outlines the development of Safety Risk Management processes as a critical step in the implementation of Metro's Safety Management System (SMS), and describes progress towards goals outlined in the Agency Safety Plan (ASP).

PURPOSE:

To keep Metro leadership informed and engaged on the strategy and progress associated with implementing Metro's SMS.

DESCRIPTION:

There are no interested parties in this matter.

Key Highlights:

- Safety Risk Management is a key component of Metro's SMS, and combines people, processes, and tools to identify, assess and mitigate safety risks before incidents occur.
- Implementation of Safety Risk Management processes is being expanded throughout Metro. Departments reporting to the Chief Operating Officer (COO) are prioritized in the multi-year implementation effort.

Background and History:

In 2016, the Federal Transit Administration (FTA) published 49 CFR Part 670 Public Transportation Safety Program which states, "*The FTA has adopted the principles and methods of Safety Management Systems (SMS) as the basis for enhancing the safety of public transportation in the United States.*" SMS is a comprehensive, collaborative approach that brings management and labor together to build on the transit industry's existing safety foundation to continuously improve how safety risks are identified and assessed with mitigating actions taken before an accident or incident occurs.

In July of 2018, the FTA published 49 CFR Part 673 Public Transportation Agency Safety Plan. Transit operators that receive federal funds (under the FTA's Urbanized Area Formula Grants) are required to develop Agency Safety Plans (ASPs) that specify how SMS will be implemented over the course of a three-year period. Metro's ASP has been approved by the Executive Management Team (EMT), Board of Directors, Washington Metrorail Safety Commission (WMSC), and certified with the FTA.

Discussion:

Safety Risk Management combines people, processes, and tools to identify, assess and mitigate safety risks before incidents occur. The implementation of proactive safety risk management is facilitated in coordination with Safety Risk Coordinators throughout the Authority. Safety hazard identification is initially performed in brainstorming workshops that engage the workforce in discussing historical, current and anticipated safety performance. Compiled information is interpreted to identify key risks and estimate their likelihood and severity. The hierarchy of controls is applied when developing risk mitigations to reduce risks as low as reasonably practicable. Mitigations that require additional resources are escalated, as needed. As mitigations are implemented, Local Safety Committees reassess current risk levels during regular meetings.

The safety risk management process emphasizes the proactive identification, assessment, and mitigation of safety risks. To support this, departments receive training on the risk management process and on the importance of safety reporting within a just culture. A centralized application and dashboard makes the risk management process transparent and accessible to all.

The Safety Risk Management process has already been implemented within the ROCC. Information on risk priorities and corresponding mitigations have been uploaded to the Hazard Management Module application which feeds the SMS Dashboard. The Dashboard enables all employees to view risks, actions being taken to reduce them, and the latest status on progress. SAFE also has partnered with Supply Chain Warehousing and Logistics (SCWL) to complete implementation of the Safety Risk Management Process. As indicated by the SMS Implementation roadmap, SAFE continues to work with departments to expand the Safety Risk Management process throughout metro. Departments that report to the Chief Operating Officer (COO) are prioritized in the multi-year implementation effort.

FUNDING IMPACT:

There is no impact on funding for presenting this informational item. Initiatives are included in the operating budget	
Project Manager:	Theresa Impastato
Project	Department of Safety and Environmental Management

Department/Office: _____

TIMELINE:

Previous Actions	As document in the Agency Safety Plan (ASP)
Anticipated actions after presentation	Implementation of the Safety Risk Management throughout Metro is planned as a multi-year process. No change to the timeline is proposed. COO groups are prioritized for baseline implementation.

Metro Safety Risk Management *Path Forward*

Safety and Operations Committee
February 10, 2022



Safety Risk Management = Mechanics of SMS

- Safety defined
 - Freedom from unintentional harm (DOT)
- Safety Risk Management combines **People, Processes, and Tools** to:
 - Identify safety risks
 - Assess – analyze and prioritize risks
 - Mitigate – reduce risk before an incident occurs



What “Good” looks like:

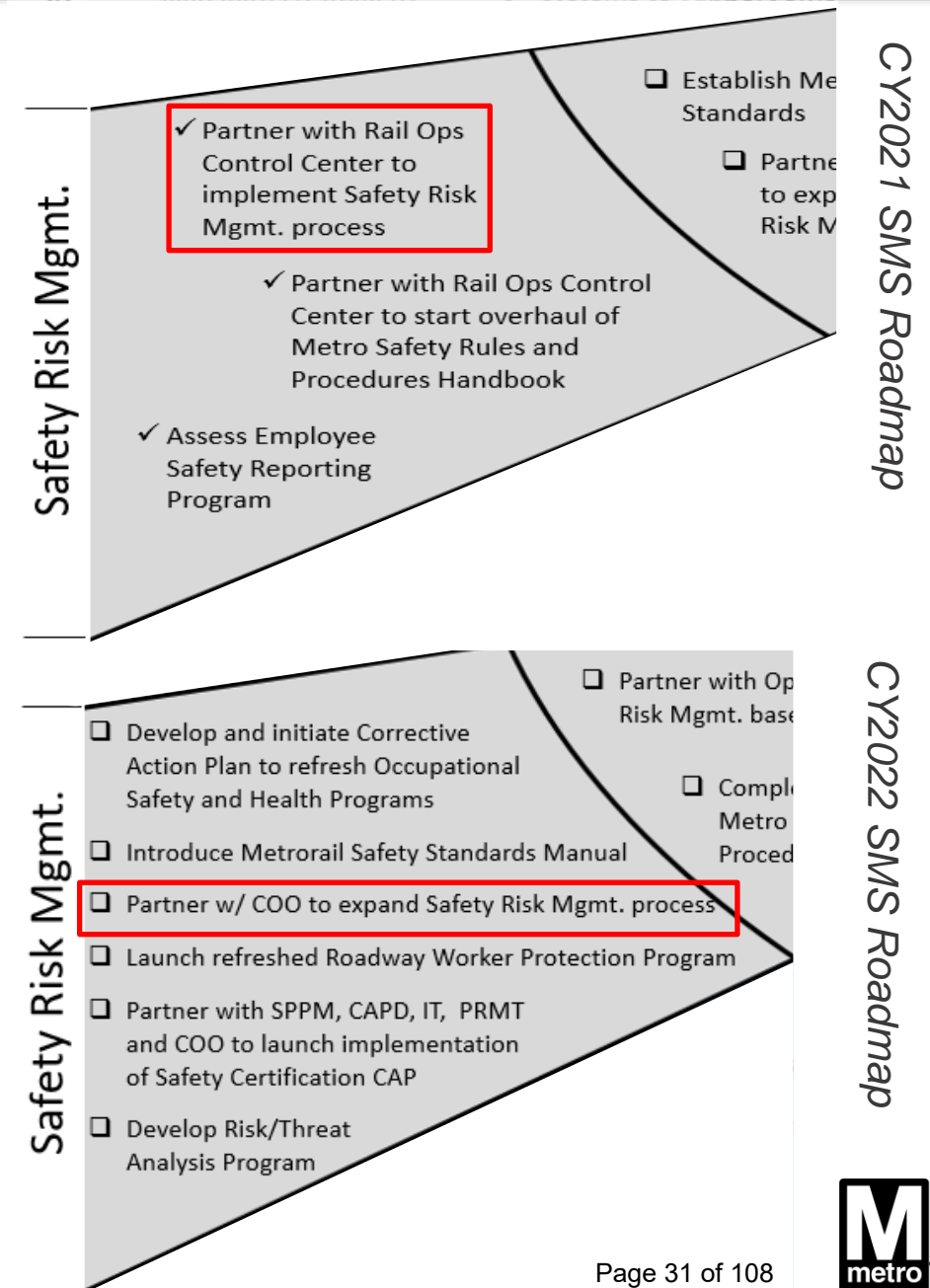
Answering Three Questions

- What are your top safety risks?
- What are you doing about them?
- Is it working?



Strategy Summary

- Set the Standard with ROCC – then expand throughout Metro
 - Outlined as a multi-year effort in the ASP
- Supply Chain Warehousing & Logistics (SCWL) volunteered to go next
 - Baseline implementation completed in January





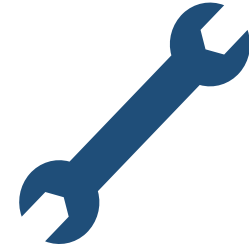
People

Safety Risk Coordinator
Brainstorming Sessions
Local Safety Committee
Training



Process

SMS Manual
Safety Risk Management
Internal Assessment
Process
Internal Assessment
Report



Tools

SMS Dashboard
Risk Submission Form
Templates

SMS Dashboard

- Links to Risk Submission Form
- Tracks current status of top risks and mitigation activities

SMS Dashboard

Enabling all personnel to know: 1) the safety risks we are managing; 2) the actions being taken to reduce them; and 3) monitor the effectiveness of our progress

Select a Department to filterSCWL

Top Risks *Description Summary

4SCWL-RM-02- Improper handling of hazardous materials

5SCWL-RM-03- Inventory management and space utilization

5SCWL-RM-04- Facility access by unauthorized personnel

5SCWL-RM-05- Environmental hazards of basement storage

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Risk Mitigation Actions

1

Completed Actions

Full Risk Profile

→

Report ROCC safety risk

Report SCWL safety risk

* Top risks include risks with the ratings of 1A, 1B, 1C, 2A and 2B.

ROCC SMS Dashboard

Risk Title

Original Risk Rating

Status

Responsible

ROCC-RM-02- Inability to quickly dissipate smoke in the rail ...

All

All

All

Risk Status Summary

1

Risks

1

High Risks

14

Mitigation Actions

5

In-progress Mitigation Actions

Risk Assessment Matrix

Glossary ?

Original State

Risk Likelihood	Risk Severity			
	Catastrophic - 1	Critical - 2	Marginal - 3	Negligible - 4
Frequent - A	0	0	0	0
Probable - B	1	0	0	0
Occasional - C	0	0	0	0
Remote - D	0	0	0	0
Improbable - E	0	0	0	0

Future State

Risk Likelihood	Risk Severity			
	Catastrophic - 1	Critical - 2	Marginal - 3	Negligible - 4
Frequent - A	0	0	0	0
Probable - B	0	0	0	0
Occasional - C	0	0	0	0
Remote - D	0	1	0	0
Improbable - E	0	0	0	0

Risk Mitigation Progress

Risk Mitigation Plan - Percent Complete

64

Risk Mitigation Action

Action Status

Fire and Smoke Skill Drills

Completed

Review and revise existing SOPs for ROCC response to Fire and Smoke emergencies

Completed

RSSC will review and update Fire and Smoke procedures

Completed

Tunnel Smoke Detection Capital Project (Phase 1)

Completed

N/A

In Progress

New Vent Fan Training

In Progress

PLNT preventive maintenance completed daily 24/7

Completed

Emergency Response Plans

Completed

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Next 12 Months

- RTRA
 - Station Management
 - Rail Operations
- CMOR
 - Vehicle Maintenance
- RIME
 - Track Maintenance
 - ATC Maintenance
 - Traction Power Maintenance
- BMNT
 - Bus Maintenance
- BOCC
 - Bus Operations Control Center
- FSVT
 - Elevator and Escalator Maintenance

ROCC Safety Management System - Our Process

Step 1: Identify Risks ROCC Personnel submit potential risks to the ROCC or WMATA system via the electronic ROCC Risk Submission Form.

Step 2: Assess Risk ROCC SMS Program Manager reviews submissions, gathers necessary data, and facilitates risk assessment with necessary subject matter experts and the ROCC Local Safety Committee.

Step 3: Current Risk Profile

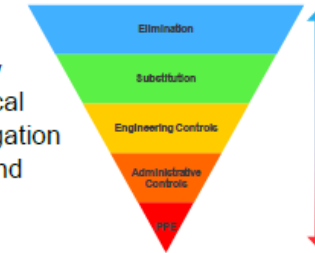
Once assessed, the risk is included in the current risk profile of the ROCC (visible on the ROCC SMS Dashboard) to prioritize the risk.

Severity	Current				Future			
	1	2	3	4	1	2	3	4
Probability - A	1A	2A	3A	4A	1A	2A	3A	4A
Probability - B	1B	2B	3B	4B	1B	2B	3B	4B
Probability - C	1C	2C	3C	4C	1C	2C	3C	4C
Probability - D	1D	2D	3D	4D	1D	2D	3D	4D
Probability - E	1E	2E	3E	4E	1E	2E	3E	4E

1. How many risks does this office have?
2. How many unacceptable risks?

Step 4: Mitigate Risks

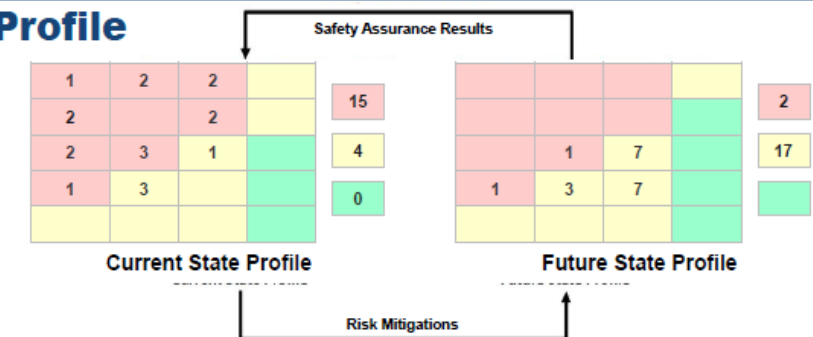
ROCC SMS Program Manager, necessary subject matter experts, and the ROCC Local Safety Committee develop integrated mitigation plans. Mitigation plans are implemented and reviewed for completeness by the ROCC SMS Program Manager.



- Physically remove the risk
- Avoid the risk
- Improve conditions to reduce risk
- Improve how people work to reduce risk
- Protect against exposure

Step 5: Future Risk Profile

As mitigations are completed, the Local Safety Committee reviews risk ratings, raising or lowering, as appropriate. Additional mitigations are developed, if needed



Step 6: Verification of Effectiveness

Mitigations are evaluated for effectiveness via internal ROCC assessments, data analysis, and other means. Additional mitigations are developed, if needed.

Questions?

