



**Audit of Milwaukee Streetcar
Safety**

AYCHA SAWA
City Comptroller

May 2023

Table of Contents

Transmittal Letter	1
Audit Report Highlights	2
I. Audit Scope, Objectives, and Methodology	3
II. Organization and Fiscal Impact	4
III. Audit Conclusions and Recommendations	4
Milwaukee Streetcar System Management Response	7



Aycha Sawa, CPA, CIA
Comptroller

Bill Christianson
Deputy Comptroller

Toni Biscobing
Special Deputy Comptroller

Richard Bare, CPA
Special Deputy Comptroller

May 16, 2023

Honorable Cavalier Johnson, Mayor
The Members of the Common Council

Dear Mayor and Council Members:

The attached report summarizes the results of the Audit of Milwaukee Streetcar Safety. The scope of the audit was:

- The Milwaukee Streetcar Safety Program from January 1, 2022 through October 31, 2022.

The primary focus of the audit was to evaluate whether the internal controls in place over Milwaukee Streetcar System are designed adequately and operating effectively. The audit objective was to determine the following:

- Determine if controls outlined in the Agency Safety Program (ASP) Plan of Milwaukee Streetcar System are operating effectively

The audit identified recommendations for increased awareness around inspections and maintenance, as well as additional training opportunities. This will lead to an increase of knowledge for all employees and contractors involved in the Milwaukee Streetcar System (aka "The Hop"), allowing them to consistently perform their responsibilities in accordance with regulations and policies to ensure the safety of the public and its employees.

Appreciation is expressed for the cooperation extended to the auditors by personnel of Department of Public Works – Milwaukee Streetcar System.

Sincerely,

A handwritten signature in black ink, appearing to read "Aycha Sawa".

Aycha Sawa, CPA, CIA
Comptroller



Why We Did This Audit

It is required by policy in the MSS Agency Safety Program (ASP) that an internal audit should be completed every three years. The goal is to review and determine if the plan is being implemented as intended.

Objectives

The objective of the audit was to determine if:

- Controls outlined in the ASP Plan of Milwaukee Streetcar System are operating effectively

Background

The streetcar is a mode of public transportation operated by the City of Milwaukee. The visibility of streetcar safety is high due to it being a public service and the City needing the streetcar to coexist with drivers, pedestrians, etc. It began service to the public in 2018.

The Streetcar Safety Manager and the Streetcar System Manager provide streetcar safety oversight. The mission is to provide safe public transportation to the public. Wisconsin Department of Transportation (DOT), the Federal Transit Administration (FTA), and Occupational Safety and Health Administration regulate streetcar safety.

Audit Report Highlights

Audit of Milwaukee Streetcar Safety

Overview

Most of the internal controls over the Milwaukee Streetcar System (MSS) and the Operations and Maintenance Contractor (OMC) processes are operating effectively. There are few areas where improvements are needed, such as semi-annual inspections of vehicles, review of Standard Operating Procedures (SOPs) and training materials and conducting of training processes to contractors.

Findings

Facilities and Equipment Inspections: Semi-annual inspections (OCT - Overhead Contact System and TPSS - Traction Power Substation) were not performed at all for certain time of period by OMC (September 2021 through January 2023).

Review of Procedures and Programs: MSS does not ensure that SOPs are reviewed and approved annually nor review the training program annually to ensure that training materials and programs remain consistent with Safety Management System (SMS) and the needs of MSS.

Contractors' safety: The OMC of MSS did not conduct the training process to all contractors who obtained the permit from City of Milwaukee to perform work on or near MSS right of way.

(Recommendations can be found in the Audit Conclusions and Recommendations section of this report.)

I. Audit Scope, Objectives, and Methodology

Scope

The scope of the audit included the Milwaukee Streetcar Safety Program from January 1, 2022 through October 31, 2022.

Objectives

The objectives of the audit were to determine whether the controls outlined in the Milwaukee Streetcar Agency Safety Program (ASP) Plan are operating effectively.

Methodology

Audit methodology included developing an understanding of the processes and controls over the Milwaukee Streetcar System. The audit program was developed using criteria outlined by the City of Milwaukee in the ASP Plan.

The audit procedures developed to evaluate the processes and controls to meet the audit objectives included process walkthroughs, inspection of relevant control documentation, and the testing of controls as follows:

- Internal Audit met with the Chief Security Officer (CSO) of Milwaukee Streetcar System (MSS) to observe the process of monitoring of implementation of policies and procedures by contractual party.
- Internal Audit identified 13 controls during a walkthrough and tested all 13 controls.
- Internal Audit met with representatives of Operations and Maintenance Contractor (OMC) of MSS to assure that rules and procedures have been implemented by OMC.
- Internal Audit completed a process walkthrough with MSS and OMC representatives on safety and security issues related to operation and maintenance of the Streetcar System.

Compliance Statement

The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. Internal Audit

believes that the evidence obtained provides a reasonable basis for the audit’s findings and conclusions based on the audit objectives.

II. Organization and Fiscal Impact

The streetcar, also known as “The Hop,” provides the public with an easy way to navigate and explore the various neighborhoods that make up Milwaukee. The Hop is currently free for all passengers. The 2022 adopted streetcar budget was \$4.35M.

III. Audit Conclusions and Recommendations

Most of the internal controls over the MSS and Operations and Maintenance Contractor (OMC) processes are operating effectively. There are few areas where improvements are needed, such as semi-annual inspections of vehicles, review of Standard Operating Procedures (SOPs) and training materials, and conducting of training processes to contractors.

Facilities and Equipment Inspections

A regular cycle of inspections for streetcars, the Operations and Maintenance Facility (OMF), the stations, the track, the Traction Power Substation (TPSS), and the Overhead Contact System (OCS) has been developed based on manufacturer’s recommendations. The American Public Transportation Association standards are also used for each facility when appropriate. The routine cycle for these inspections is determined by the recommendations of the manufacturer. Regular MSS inspections include:

- Daily Vehicle Manufacturer inspection
- Daily MSS operator pre-trip (prior to each trip)
- Daily MSS operator post-trip (at conclusion of each trip)
- Daily MSS operator interior walk-through (at terminal stations)
- Daily station inspection sweep
- Biweekly track inspection
- Monthly yard inspection
- Monthly OMF fire system inspection

- *OCS Inspection*
- *TPSS inspection*
- *Yearly OSHA OMF audit*

Additional inspections of equipment, facilities, and systems may be performed as needed.

Finding: The Operations and Maintenance Contractor of MSS did not perform the semi-annual inspection of vehicles, which include OCS and TPSS inspection. Semi-annual inspections are required based on the manufacturer's recommendation. However, there is a gap from September 13, 2021 to January 03, 2023.

Risk: Suspension of services. *Risk Rating: Medium*

Recommendation 1: Semi-annual inspection of vehicles should be performed as per manufacturer requirements in order to minimize the possibility of future equipment failure, reduce or minimize wear rates, replace consumable parts, and satisfy warranty requirements.

Employee Safety Programs

Safety training is conducted on all MSS equipment. Operating rules and SOPs are issued by the OMC to all operating personnel and contractors. The operating rules and SOPs are revised and approved internally by the OMC on an annual basis. The Chief Security Officer (CSO) reviews the safety training program annually to ensure that training materials and programs remain consistent with Safety Management System (SMS) and the needs of MSS.

Finding: The CSO does not guarantee that SOPs are reviewed and approved annually. Additionally, the CSO does not review the training program annually to ensure that training materials and programs remain consistent with SMS and the needs of MSS.

Risk: Safety of employees due to changes of circumstances. *Risk Rating: Low*

Recommendation 2: The CSO should ensure that the SOPs are reviewed and approved on an annual basis. Additionally, the CSO should review the training program annually to ensure that training materials and programs remain consistent with SMS and the needs of MSS.

Contractor Safety Coordination

The Operations and Maintenance Contractor (OMC) requires all employees, contractors (internal and external), and any other persons who perform work on or near any track or high voltage system area to attend the required Roadway Worker Protection Program. This includes anyone performing any form of work that is within 50 feet of track or TPSS or may impact rail service. Such parties will be required to obtain a Streetcar Alignment Access Request (SAAR) permit and successfully complete the Roadway Worker Protection Program.

Finding: The OMC of MSS, Transdev, did not conduct the training process to eight (out of ten randomly selected) contractors not part of the construction or operations activities associated with MSS, but still obtained the permit from City of Milwaukee to perform work on or near MSS right of way.

Risk: Safety of contractor employees due to in-knowledge of working procedures on or near MSS right of way. *Risk Rating: Medium*

Recommendation 3: The OMC should conduct the training process to all contractors not part of the construction or operations activities associated with MSS to obtain a working permit to work on or near MSS right of way.



Department of Public Works
Streetcar

Jerrel Kruschke, P.E.
Commissioner of Public Works

Danielle A. Rodriguez, M.B.A.
Director of Operations

Andrew Davis-Lockward
Streetcar System Manager

May 16, 2023

Ms. Aycha Sawa
City Comptroller
Office of the Comptroller

Dear Ms. Sawa,

With this letter, the Department of Public Works responds to three findings of the Audit of the Milwaukee Streetcar Safety Program performed by the Comptroller's Office. The three findings have been included in the Milwaukee Streetcar System (MSS) Corrective Action Plan (CAP) and follow the procedures established in section 10.3 of the Agency Safety Plan (ASP). The department's actions taken in response to the audit are below:

1. Audit Recommendation - Facilities and Equipment Inspections:

Semi-annual inspection of vehicles should be performed as per manufacturer requirements in order to minimize the possibility of future equipment failure, reduce or minimize wear rates, replace consumable parts, and satisfy warranty requirements.

- a. Department Action: CAP-02-23. The contractor general manager (GM) and the MSS Safety Review Committee (SRC) will add language to the 2023 ASP revision to include asking for extensions if deadlines are not met. Targeted date: November 30th, 2023.

2. Audit Recommendation - Employee Safety Programs:

The Chief Security Officer (CSO) should ensure that the standard operating procedures are reviewed and approved on an annual basis. Additionally, the Chief Security Officer should review the training program annually to ensure that training materials and programs remain consistent with the SMS and the needs of the Streetcar system.

- a. Department Action: CAP-03-23. CSO and GM will incorporate a document review page for each document. Target date: July 23rd, 2023 SRC meeting

3. Audit Recommendation - Contractor Safety Coordination

Transdev (contractor) should conduct the training process for all contractors not part of the construction or operations activities associated with the Streetcar system to obtain a working permit to work on or near Streetcar system right of way.



- a. Department Action: CAP-04-23. GM will revise the Streetcar Alignment Access Request (SAAR) document to include Contractor employees and the date of Roadway Worker Protection training. Targeted date: July 23rd, 2023 SRC Meeting.

Sincerely,

A handwritten signature in black ink, appearing to read 'Danielle Rodriguez', with a stylized flourish at the end.

Danielle Rodriguez, M.B.A.
Director of Operations