Weapons Detection Systems Pilot Quarterly Update

Executive Management Committee
Operations, Safety, and Customer Experience Committee
June 18, 2025

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Background

April 2024
Board Motion 34.1

July 2024
The Board authorized the piloting of two weapons detection systems

August 21–October 15, 2024
Brandished Firearm Video Analytics Proof-of-Concept Pilots

October 21–December 19, 2024
Concealed Weapons Passenger Screening No-Cost Proof of Concept Pilots (Dual-lane & Pillar-type)

February 2025
Board Motion 39

June 2025
First Quarterly Update

(Left to Right) Brandished Firearm Video Analytics and Concealed Weapons Detection System (Pillar-type)

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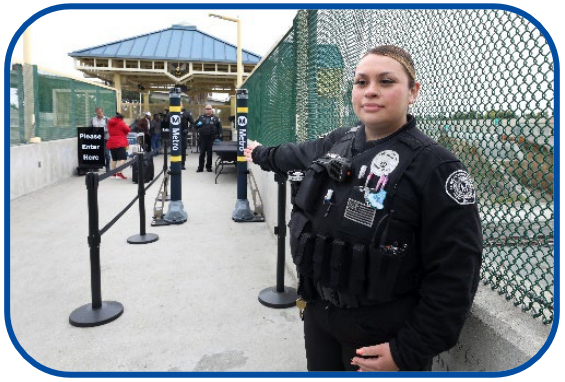
Concealed Weapons Screening

12 target station locations were identified*, guided by data on weapons-related incidents, Transit Watch app reports, entrance counts, and feasibility of setup.

On April 28, passenger screenings began at the Norwalk (C Line) Station and San Pedro (A Line) Station.



Norwalk Station

Initial Findings

Norwalk Station

- MTS officers encounter an average of three bladed objects per shift
- No firearms have been detected
- On average, three individuals have declined screening per shift
- Secondary screening times averaged 10 seconds

San Pedro Station

- Similar findings to Norwalk
- Operational challenges associated with station layout
  - Narrow station footprint
  - Proximity to vehicle traffic and tracks complicate screening logistics due to electrical interference

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*Selected stations are not identified for *operational security purposes, in accordance with 49 CFR § 1520.5 (b)(8)(i).*

Concealed Weapons Screening: Success Metrics

	Definition	Purpose	Goal
Weapons Arrests (Possession)	Number of arrests for possession of a weapon (gun/knife) detected during pilot deployments	Assess the potential deterrent effect of weapons screening by measuring trends in weapons-related arrests compared to baseline arrest activity at the same stations using a 60-day period before system deployment.	Decrease weapons arrests by 30%
Assault with Weapon (Gun/Knife)	Number of assaults involving a weapon occurring at screening locations	Monitor whether pilot presence correlates with reduced assaults with a deadly weapon.	Decrease assaults with a weapon by 30%
False Negatives	Incidents where a test weapon passes through the system undetected (the system fails to alert)	Assess the reliability and detection accuracy of the screening system.	False negatives <10% occurrence
Weapons Detected	Instances where the system alerts and a weapon is found during the secondary search	Measure the accuracy and deterrence of weapons.	Average number of weapons detected per screening period during 60-day deployment
Transit Watch Incident Reports (Gun/Knife)	Number of gun/knife-related incident reports submitted via the TW app during the pilot period at the stations	Supplement formal incident data with rider-reported feedback at the stations with screening locations.	Decrease by 25%
Online Sentiment (Social Media)	Monitoring of social media posts/comments mentioning weapons detection at Metro facilities	Gauge informal public feedback and public perception trends.	Decrease negative sentiment of public safety by 10%, measured at 60-day intervals after pilot initiation, compared to the 60 days before the pilot began
Cost/Benefit	Assess the financial feasibility and overall value of the deployed technologies	Fiscal sustainability.	Costs will be weighed against measurable benefits in relation to safety outcomes and customer experience.

Weapons Detection Onboard Buses

Metro's exploration of bus-based weapons detection represents *a first-of-its-kind initiative*; the effort requires designing, engineering, development, and installing a system that can accommodate different bus models.

- On March 6, the vendor surveyed two buses from Metro's fleet, and a cost proposal was provided to Metro for one 40-foot bus, one 60-foot bus, and a fixed installation at Union Station West.
- **Metro is proceeding with a sole-source procurement to initiate the pilot** under a structured, phased approach that includes a fixed-location installation and two bus-based options.
- Will begin with a baseline deployment at a fixed location incorporating dual detection units, cloud-connected AI-enhanced IP cameras, and integration with Metro's Genetec video management system.
    - The fixed-location implementation will allow staff to assess real-time performance data, operator feedback, throughput metrics, nuisance alarms and response workflows before advancing to mobile configurations.
    - Outcomes of the fixed deployment will inform Metro's decision on whether to exercise contract Option 1 (installation on a 60-foot articulated bus) and Option 2 (installation on a 40-foot standard bus).

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Video Analytics
Brandished Firearm Detection

In March, Metro requested detailed technical and site assessment documentation from the highest performing vendor during 2024 testing.

- A formal systemwide infrastructure review is scheduled to begin in **July 2025**.
- Findings from this review will inform a formal infrastructure readiness assessment, which will be included in an update to the Board later this year, at a date to be determined.

Category	Current Metro CCTV Capabilities	Requirements for Brandished Firearm Detection Analytics
Camera Resolution	Low to standard definition; optimized for constant live-viewing requirements	High-definition (HD) or greater to ensure visual clarity for detection
Frame Rate	Minimal frame rate; sufficient for monitoring	High, stable frame rate required for frame-to-frame analysis
Network Bandwidth	Limited; configured for low data throughput	High bandwidth is necessary to support streaming video across the network
Storage Capacity	Optimized for incident-based playback	Rapid-access capability for video-based AI processing and review
Camera Processing Load	Low processing demand; not designed for analytics workloads	Continuous data streaming to edge servers or cloud analytics systems
System Longevity	Standard operational lifespan expected	Risk of accelerated wear from higher operating loads
Use Case Fit	Suitable for live monitoring and post-incident review	Must support real-time object recognition and alert generation via AI tools

Community Engagement

- Updates on the findings from the initial pilots have most recently been presented to the Accessibility Advisory Committee (AAC) on March 13, 2025, Metro's Public Safety Advisory Committee (PSAC) on April 3, 2025, and the Technical Advisory Committee (TAC) on May 7, 2025.
    - Metro is also working more closely with the AAC to ensure that system design and operations consider the needs of riders with disabilities.
- Feedback from patrons during station screening has been largely positive, with people expressing gratitude for Metro creating a sense of a safer environment.
- SSLE is also working with the Customer Experience department to develop a survey, which will be another avenue for the public to share their feedback.

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Next Steps

- Metro staff will continue with the implementation of the concealed weapons detection system pilot, rotating deployments at select station entrances.
- SSLE will work to implement the proposed onboard bus detection pilot.

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