MAKING CONNECTIONS, MAKING A DIFFERENCE

att a late II

Making 2024

THE OWNER WHEN

The National Transit Workforce Conference

-• November 11 – 13. 2024 · Baltimore. MD •-



Moving Toward Solutions for Transit Worker Safety



Q Safety Briefing

- Note your location: Hilton Baltimore Inner Harbor, Floor 1.
- Identify your nearest exits.
- Automated system will alert attendees if we need to evacuate the building.
 - Use stairs, not elevators. Anyone unable to use the stairs will be assisted by fire department at the stairwell between the two exit signs in North Foyer.
 - Our assembly point is Northwest Warehouse, 333 West Camden Street, just behind the Sports Legend Museum and adjacent to the ballpark.
- In the event of medical emergency, call 911 from a cell phone (if no cell phone, use house phone). Security (443-683-8801) will also assist. Hotel has qualified staff to perform first aid and operate CPR.
- To report emergencies to the hotel, dial 65 on a house phone.



Q FTA's Strategic Workforce Development Goals



Strengthening Workforce Health and Safety



Funding Workforce Development



Enhancing Outreach and Recruitment



Retaining a Strong & Diverse Workforce



Advancing Skills, Careers and Partnerships



Utilizing Workforce Data and Metrics







Lisa Staes Associate Director Center for Urban Transportation Research (CUTR)



Stewart Mader Senior Program Analyst for Safety Policy *Federal Transit Administration*



Andrew Falotico Health and Safety Director Amalgamated Transit Union



Russell Bateman

Training and Education Administrator *Amalgamated Transit Union*



Michael McMillan President and Business Agent Amalgamated Transit Union Local 1300 (MD)



Alexander Houck

Deputy Chief Safety Officer Maryland Transit Administration





Transit Worker and Rider Assaults Data and Countermeasure Briefing

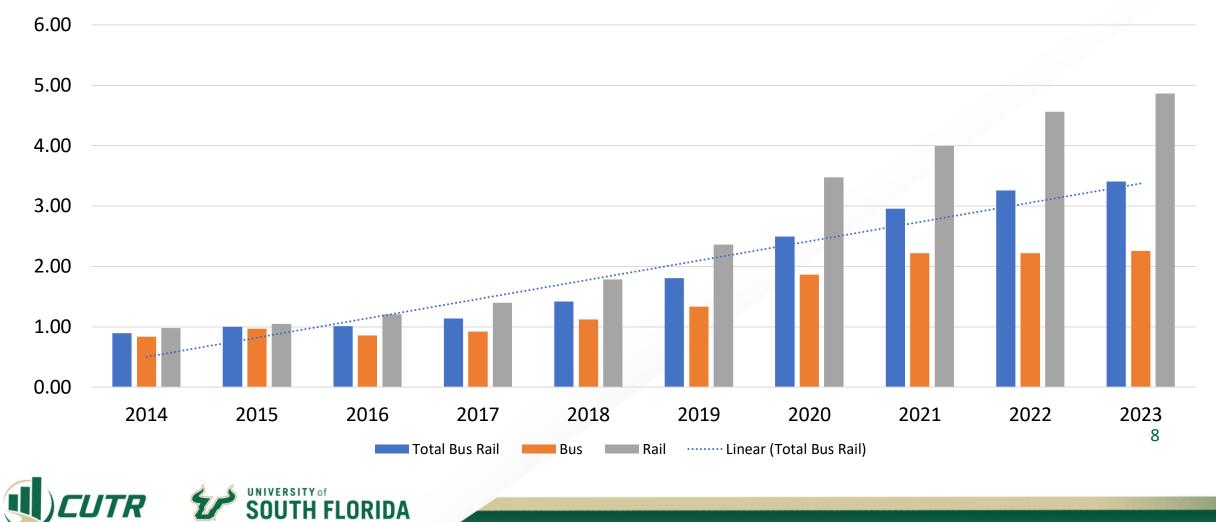
11/18/2024

Outline

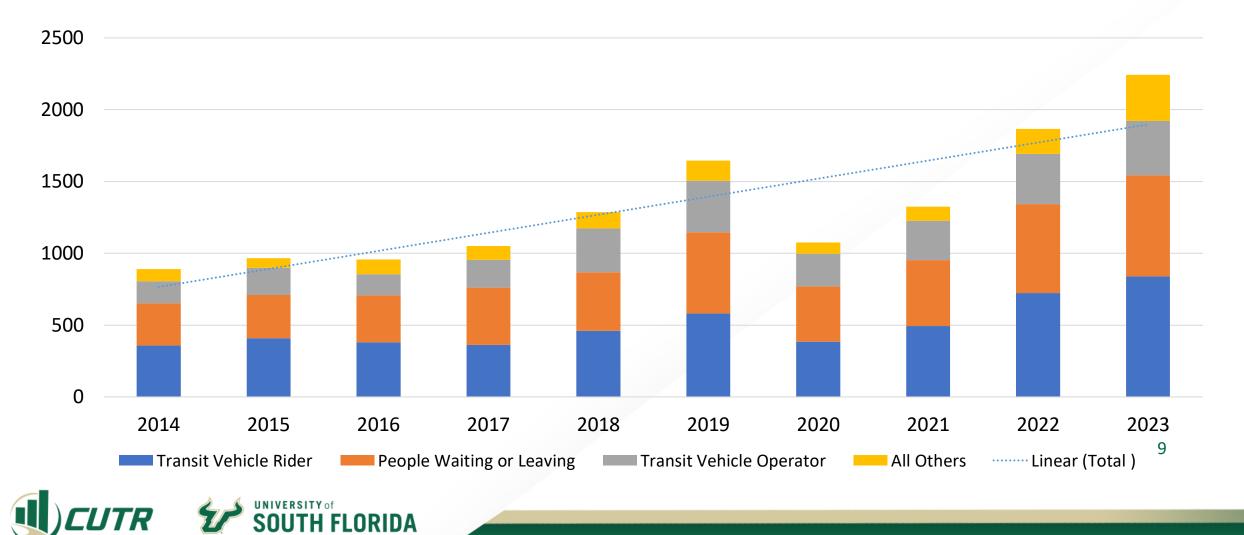
- Brief Data Presentation
- CUTR Research Underway (USDOT and FTA)
- Key Literature Review Findings
- Case Study Agencies Countermeasures and Practices
- Final Thoughts and Available Resources



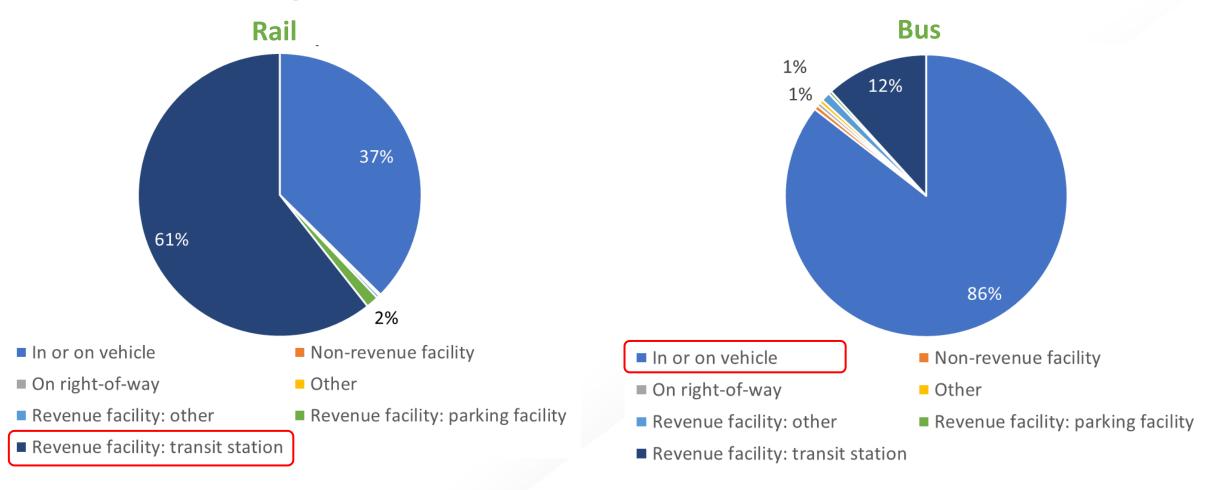
Transit Assaults All Modes – Rate / 10 million UPTs



Transit Assaults – by Injured Person



Assaults by Location – Rail and Bus





CUTR Research Underway

FTA – Examining Transit Assault Causation and Presenting Stakeholder-driven Mitigation Strategies and Tools to Reduce Assault Risk

Mineta UTC – Understanding the prevalence of mental health and behavioral distress in transit assaults and presenting targeted response and mitigation methods to reduce victimization trends¹¹



Contributing Factors to Transit Assaults



Co-Occurring Disorders

- Mental Illness (MI)
 - At times, severe MI

UNIVERSITY of

- Substance Use
 - Drug Overdoses



Anger/Hostility

- Fare Evasion
 - Financial Instability
- Escalation of minor conflicts and unprovoked assaults



Homelessness

- Unstable Housing
- High dependency on public transportation
 - Sleeping on transit vehicle or in transit environments.

- Crime is more likely to happen when three things are in place: a motivated offender, a suitable target, and the absence of a capable guardian.
- Responsiveness and response time of transit police or local law enforcement is critical.



- Improved lighting, increased visibility, and other CPTED treatments decrease risk perceptions and fear among riders and may reduce the likelihood of events.
- There is a connection between isolation and victimization. Bus stop placement considerations:
 - Surrounding street lighting and lighting from businesses, intersection treatments
 - Landscaping @ and near the location
 - Bus stop shelter design
 - Other applicable CPTED elements
 - Location in the physical environment surrounding businesses/activities



• Coupling AI and video analytics software with CCTVs may provide real-time alerting not only during the event, but may also be used to recognize behavioral trends, previous perpetrators or those that have been trespassed from the system, or body language that can predict probable or imminent threat of violent or aggressive behavior.



 The watching eyes effect may reduce antisocial behavior as much as 35%.
 WMATA has designed and is utilizing this graphic on their buses.





- On time performance, missed pick-ups, delayed departures, and communication failures can contribute to assault events. Strategies can include:
 - Review, evaluation, and modifications to route and stop timing
 - Improved technology applications that provide real-time alerts on vehicle arrival time – bus and rail



- There is inconsistency across the industry in the design and delivery of de-escalation training. There may be additional guidance or curriculum review and evaluation that could lead to improved efficacy, uniformity, and structure of de-escalation training across the industry.
- Targeted sensitivity and communication training may help reduce assaults.



- No one strategy alone can eliminate or significantly reduce assaults
- Transit agencies must establish comprehensive strategies, both "multifaceted" (i.e., policies/procedures, people, and technology) and "layered" (i.e., systematic approaches deployed jointly or in tandem).



Just as we have causal density, we likewise need countermeasure density...

Countermeasures and Practices

"The **concurrent** implementation of **multiple** countermeasures designed around the **specific** type, frequency, location, and other elements of a transit agency's experiences are often where **success** is found" (research team)



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Case Study Locations

- Alameda/Contra Costa Transit (AC Transit)
- Ann Arbor The Ride
- Chicago Transit Authority (CTA)
- Dallas Area Regional Transit
- Denver RTD
- Los Angeles County Metropolitan Transportation Authority (LA Metro)
- Massachusetts Bay Transportation Authority (MBTA)
- Metropolitan Transportation Authority/New York City Transit (NYCT)
- Metro Transit, Minneapolis, Minnesota (MetroTransit)

- Miami-Dade Transit (MDT)
- New Jersey Transit (NJT)
- Pittsburgh Regional Transit (PRT)
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- TriMet
- Washington Metropolitan Area Transit Authority (WMATA)
- River Cities Public Transit (rural)
- Confederal Tribes of the Umatilla Indian Reservation (tribal)



Countermeasures and Mitigation Strategies

- Community Campaigns and Engagement
- Mental Health and Homelessness
- Capable Guardians
- Station Design or Operational Modifications
- Training



Societal
ChallengesCommunity-
based Solutions

Community Campaigns and Engagement



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Mental Health and Homelessness – DART CARES

New DART program to address homeless, mentally ill looks promising Dallas Morning News, July 2023

• Physical and mental health referrals

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- Job opportunities for homeless working with Union Gospel Mission Dallas
- Downtown Dallas, Inc. and Dallas Police Department expanded law enforcement partnership – connects people who are homeless to support programs and resources
- Expanding program to work with Habitat for Humanity providing jobs and skill training





Mental Health and Homelessness – Denver RTD



- RTD Transit Police Outreach Program mental health coresponder team (collaboration with WellPower with financial support from Medicaid)
- Mental Health Clinicians and Homeless Outreach Coordinators, working alongside RTD Transit Police – *a success story*
- Denver Homeless Navigator Coordinator (contracted with Jefferson Center for Mental Health) and Homelessness Awareness Program
- RTD Mental Health Videos for training and awareness



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Presence of a "capable guardian"

"Crime & victimization happen when three things are in place: a motivated offender, a suitable target, and the <u>absence of a capable guardian</u>" (Cohen & Felson, 1979)



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Unarmed Outreach/Ambassador Programs

- LA Metro Transit Ambassador Program community-based offering trauma-informed and rider assistance solutions and crisis intervention services (over 300 ambassadors in program)
- SEPTA Unarmed Outreach Services: Safety, Cleaning, Ownership, Partnership, and Engagement (SCOPE) Initiative – targets improved mental and physical health of SEPTA employees and riders
- Toronto Transit 2022 added 130 customer service agents and 30 supervisors posted to subway stations and platforms (from January 2023 – early 2024, offences against customers down 24%)



Unarmed Outreach/Ambassador Programs

- **BART** expanded use of ambassadors, hired community-based groups as elevator and underground restroom attendants
- King County Metro added Metro Ambassadors and a new Behavioral Health Support Team. 33% decrease in security incidents and drug-related events from January 2023 to January 2024
- Denver RTD "Impact Team" of 40 RTD employees deployed to rail stations and bus stops during peak hours, major events, and service disruptions



Increased Policing

Chicago Transit Authority

- Chicago PD agreement for volunteer, off-duty patrols
- 50 2-person teams with K-9 units
- Onboard security guards increased from 200 to 300
- ZeroEyes AI technology pilot
- Denver RTD
 - Expanded police officers from 19 (August 2022) to 81 now (September 2024), 109 by the end of 2024, and likely total of 162 by the end of 2025
 - Live "look in" in all buses



Perception of Active Surveillance can Deter Violence

- Highlight video surveillance
- Make the signs salient
- Surveillance can be a "capable guardian"





Source: WMATA



Station Design or Operational Modifications

- BART 4,000 additional cameras, improved lighting at stations and parking areas
- BART operational modification shorter trains/increased frequency on nights/weekends
- Charlotte Area Transit railyard lighting study followed by enhanced lighting yard
- DART increased use of LED lighting and solar panels at bus stops/shelters
- Industrywide increased use of CPTED treatments

Reduce fear and risk perceptions: improve lighting, remove obstacles on platforms/stations that can conceal individuals, use transparent enclosures at stops/seating/waiting areas, keep stations and platforms maintained and clean

Station Design or Operational Modifications

- Denver RTD "Customer Experience Elevator Program" initial 90day pilot at 6 LRT stations now expanded. Reprogrammed station elevator doors to rest in the open position to limit and / or deter illegal and unwanted behaviors
 - Findings significant reduction in security-related incidents and disturbances



Training

- Increased use and frequency of de-escalation training
- Including sensitivity and mental health awareness in de-escalation training
- <u>Welle Training</u> Behavioral Safety Management Training
- EAP training "transit workers are prone to involvement in traumatic events leading to higher rates of PTSD compared to the general public...follow-up mental health support is needed for this vulnerable population" (Carey et al, 2021)





- Denver RTD-produced Mental Health Videos (available on Vimeo)
 - <u>RTD_AFFECTIVE DISORDERS MODULE_FC</u>
 - <u>RTD_THOUGHT_DISORDERS_MODULE_FC</u>
 - <u>RTD_DEVELOPMENTAL DISORDERS MODULE_FC</u>
 - <u>RTD_SUICIDE_MODULE_FC</u>
 - <u>RTD_TRAUMA_MODULE_FC</u>



Steve Martingano, Deputy Chief of Police, RTD





Final Thoughts

- Control the Message/Perceptions Impacts
 - Ridership Implications
 - Employee Hiring/Retention
- Society Challenges Victimization Trends
 - Need for Community-based Solutions

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- Think out of the Box Technology Solutions, Vehicle and/or Compartment Redesigns
- Industry would benefit from national legislation that provides increased protection for transit workers and increased penalties to those who assault transit workers
- Risk Assessment/Risk Mitigations & Strategies (General Directive 24-1: Required Actions Regarding Assaults on Transit Workers)
- Strategies must be targeted to <u>specific</u> areas of risk identified and rated through data-centric analyses and must be monitored and evaluated



Lisa Staes, Associate Director Center for Urban Transportation Research <u>staes@usf.edu</u>

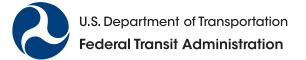


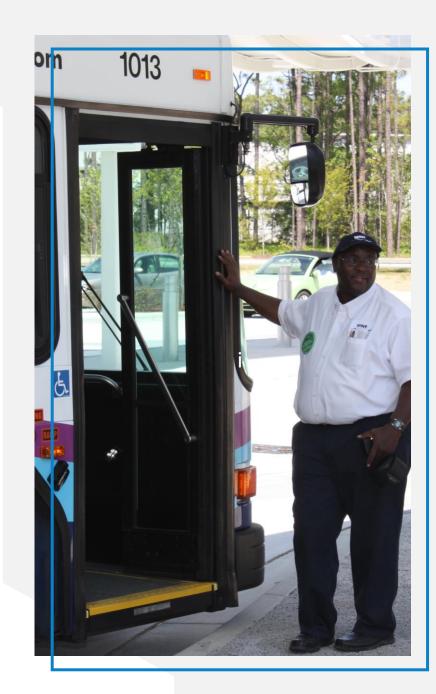
Making Transit Safer

Stewart Mader, PTSCTP Senior Program Analyst, Safety Policy Office of Transit Safety and Oversight (TSO)

2024 Transit Workforce Conference

11/12/2024







- Public Transportation Agency Safety Plans Final Rule
- National Public Transportation Safety Plan
- FTA Safety Rulemakings
- General Directive 24-1: Assaults on Transit Workers
- Resources



Major Safety Updates

Public Transportation Agency Safety Plans (PTASP)



Finalized first Final Rule under Bipartisan Infrastructure Law (BIL) making transit safer for both workers and passengers

Incorporated BIL safety requirements including:

- Setting performance targets for safety risk reduction programs
- Advancing systems to protect transit riders and workers
- Expanding de-escalation training
- Protecting transit workers from assault and people from collisions with transit vehicles

National Public Transportation Safety Plan (National Safety Plan)



FTA's primary guidance document for improving safety performance of transit systems receiving FTA funding



Technical Assistance and Compliance

- ✓ FTA expects transit agencies to address the regulatory changes in the new PTASP Final Rule in their next Agency Safety Plan (ASP) annual update
- ✓ The PTASP regulation requires transit agencies to document a process in their ASP to review and update their ASP annually to address needed changes, including regulatory changes
- ✓ FTA provides technical assistance for PTASP requirements and Safety Management System (SMS) implementation through its PTASP Technical Assistance Center (TAC)
 - ✓ One-on-One assistance
 - \checkmark Webinars, workshops, and roundtables
 - ✓ Agency Safety Plan (ASP) voluntary reviews







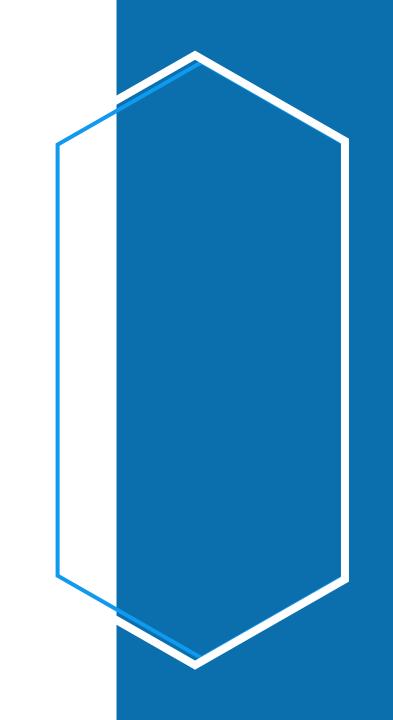
Additional FTA Safety Rulemakings

*	Public Transportation Safety Certification Training Program (PTSCTP)	State Safety Oversight (SSO)	Rail Transit Roadway Worker Protection (RWP)		Transit Worker Hours of Service and Fatigue Risk Management		
	Streamlines communication and administrative processes and clarifies voluntary participation and recertification training requirements.	Introduces changes to clarify SSOA oversight responsibilities and authority to conduct inspections and Bipartisan Infrastructure Law (BIL) provisions.	2024	Final Rule establishes minimum baseline standards and risk-based redundant protection requirements for transit workers who work on or around tracks.	2024	Requested public feedback and information to understand current industry practices, priorities and requirements on transit worker hours of service and fatigue risk management.	



Assaults on Transit Workers





FTA Actions to Address Assaults on Transit Workers

2019 – Protecting Public Transportation Operators From Risk of Assault Federal Register Notice

- Alerted transit agencies to the need to address the risk of transit operator assault through SMS processes required under the PTASP regulation.
- 2022 Special Directives: Required Actions Regarding Transit Worker Assault
 - Determine if transit agencies reporting majority of assaults are addressing safety risk
 - 4 of the 9 Special Directive recipients had completed a safety risk assessment prior to issuance of Special Directive
 - FTA concluded additional intervention required
- 2023 Proposed General Directive Published for Public Comment
 - Proposed requiring all transit agencies subject to the Public Transportation Agency Safety Plans (PTASP) regulation to take action regarding assaults on transit workers

2024 – General Directive 24-1: Required Actions Regarding Assaults on Transit Workers

Published September 25, 2024 in the Federal Register



General Directive 24-1: Required Actions Regarding Assaults on Transit Workers

By December 26, 2024, all transit agencies subject to PTASP Final Rule must:

Conduct Safety Risk Assessment for Assaults on Transit Workers

• Safety risk assessment conducted within 12 months preceding General Directive publication may be used

Identify Safety Risk Mitigations

• Each transit agency serving a large urbanized area must involve the joint labor-management Safety Committee when identifying safety risk mitigations

Submit Information to FTA

• Each transit agency must submit information on how they are assessing, mitigating, and monitoring the safety risk associated with assaults on transit workers



Safety Risk Assessment

- Safety risk assessment is a critical Safety Management System (SMS) tool for assessing risk to help prioritize and develop mitigations
 - Identify hazards associated with assaults on transit workers
 - Use Safety Risk Management processes to assess safety risk related to assaults
 - Risk Rating: Likelihood & Severity



SMS Report

What is SMS Report?

- An information collection tool for Safety Management System (SMS) reporting
- Captures results of transit agencies' SMS processes, including the results of safety risk assessments, and safety risk mitigation-related information
- Designed to streamline transit agency reporting in response to General Directive 24-1

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Safety Management System Report		Discretionary Grants System			
E FTA CRM		COVID-19 Form			
Contact Relationship Management		Transit COVID-19 Response Program			

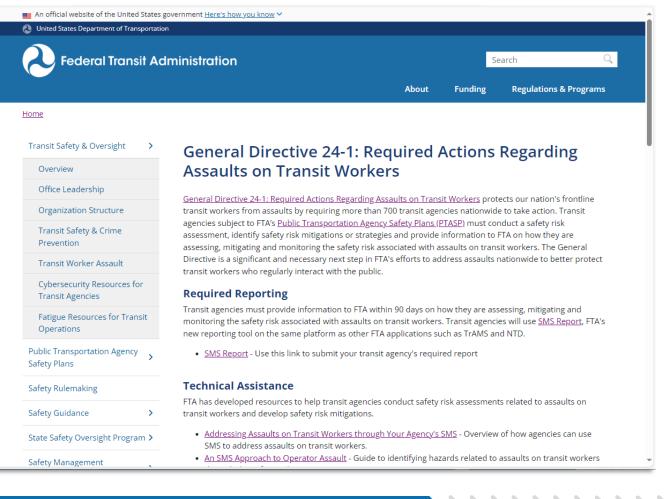


General Directive 24-1

For access to General Directive 24-1, SMS Report, and technical assistance tools for conducting required Safety Management System (SMS) activities, visit

transit.dot.gov/assaults



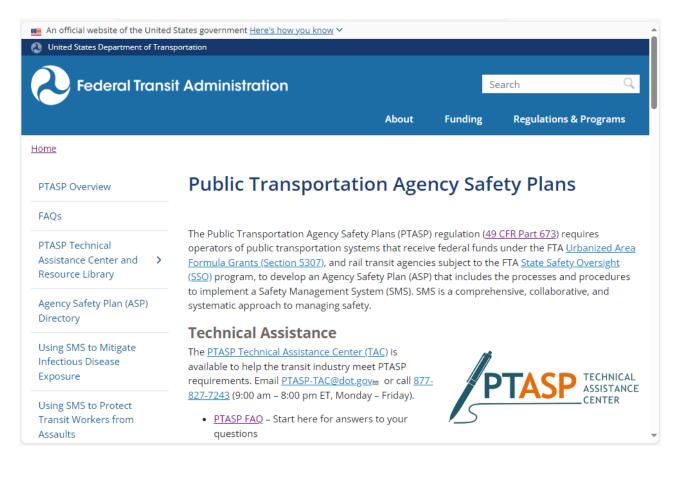




Public Transportation Agency Safety Plans

Technical Assistance Center includes resources to support using your Safety Management System (SMS) to protect transit workers from assaults.







Thank you!

Stewart Mader 202-366-9677 stewart.mader@dot.gov

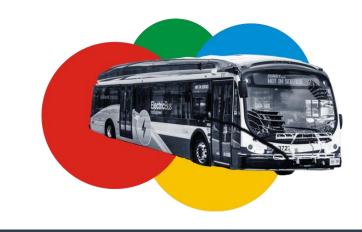


Federal Transit Administration



BUS DESIGN INNOVATION PROGRAM







Bus of the Future Project



The FTA Accepts ATU International Findings and Recommendations on Transit Bus Hazards and Solutions.

- Eliminate workstation blind spots
- Protect operators from assault
- Improved ergonomics Proper Workstation
- Reduction in whole-body vibration
- Reduction in steering effort
- Improved air quality





Bus Design Innovation Program (BDIP)

A Collaborative Applied Research inspired by **Bus of the future**



Bus Redesign Objectives – Full Operator Barrier

Improve operator security

- No openings for assaults
- Protects against viruses
- Reduces glare/reflections
- Ensures customers are not blocking operator sight lines





health and safety benefits

Bus Redesign Objectives – Seat and CMS

Active/Semiactive seat

- Controls vertical acceleration
 experienced by operator
- Superior ergonomics for reduction of excessive musculoskeletal injury rates

Camera Mirror System

- Increases operator visibility
- Improves vision, ergonomics, operator security
 - Decreases cognitive load and distraction





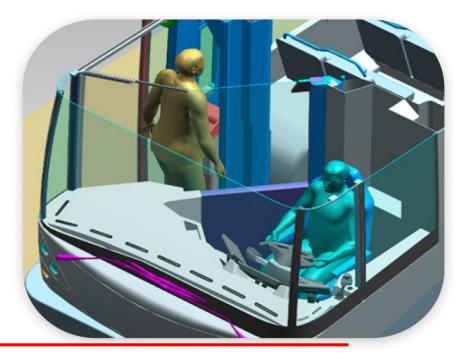


Bus Redesign Objectives -



Long Term

• A-pillar elimination or size reduction: increase visibility

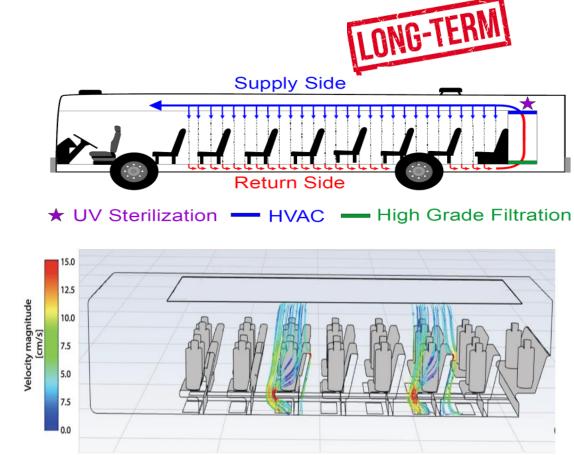




Bus Redesign Objectives – HVAC vertical flow

Improved HVAC Design

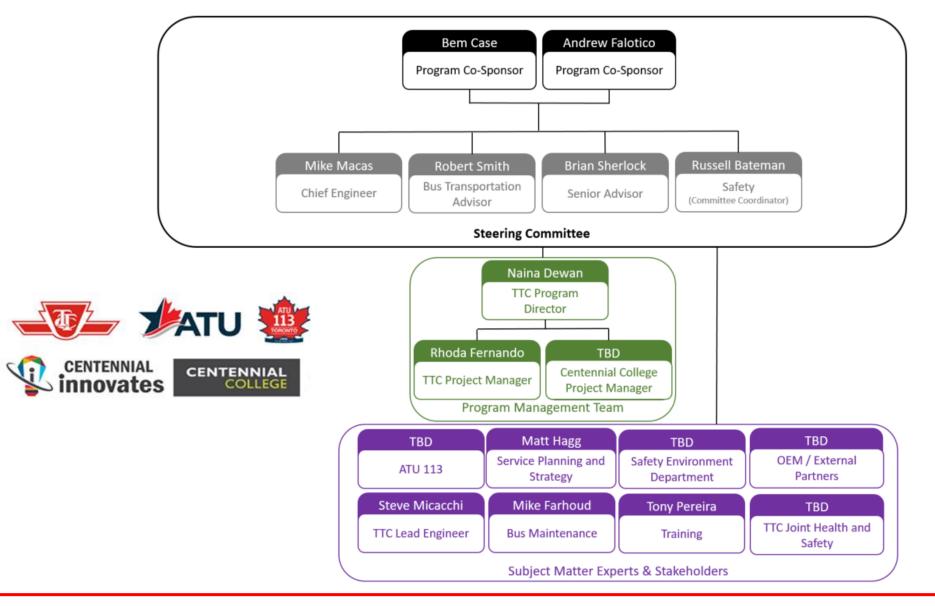
- Provides respiratory hazard protection for operators with positive pressure isolation from viral transmission.
- Provides passenger protection through revised airflow, filtration, and sterilization.



A National Academy of Science panel, convened to address COVID hazards in transit, recommended proceeding to prototype testing of the concept.



Program Governance



Evaluation of Design Features





- Feedback Surveys with Operator
- Health & Safety Committee Participation
- Assessment and Evaluation of Design Concept and Innovations.

Bus of the future

Buses have been designated for retrofits of new technologies under the program

- New Flyer Battery Electric Bus (BEB)
- Nova Hybrid-Electric Bus
- VanHool bus





Spotlight: Innovation Evaluation

- Innovation and evaluated by frontline transit workers and feedback gathered through surveys
 - TTC Family Day
 - ATU Can-Am Conference
 - ATU Canada Conference

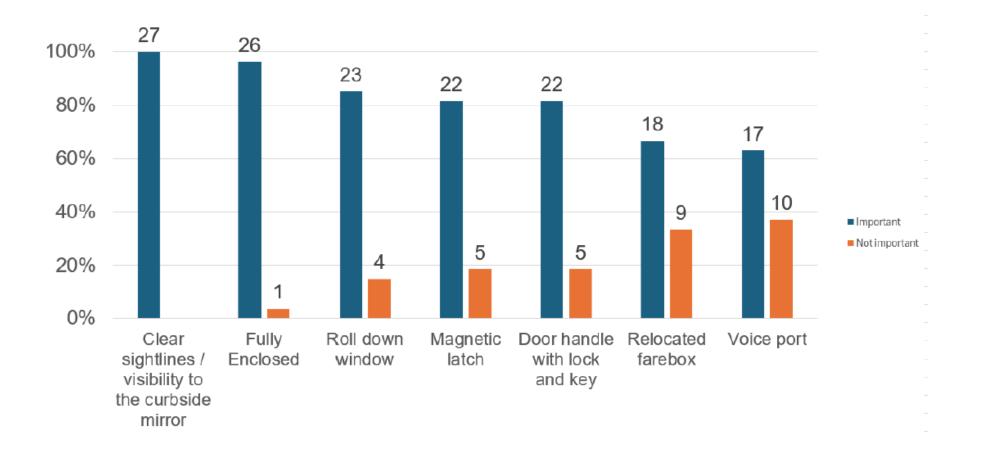
Questions:

- How interested are you in exploring a fully enclosed barrier
- Rank Barrier types in order of preference
- What do you think of the features on the new barriers, important or not important?
- Concerns with the showcase barriers?
- What do you think of the iterative and consultative approach we are taking in the Bus Design Innovation Program?
- What other problems facing bus operators do you think we should solve for?
- If you are concerned with any of the features, please explain why.

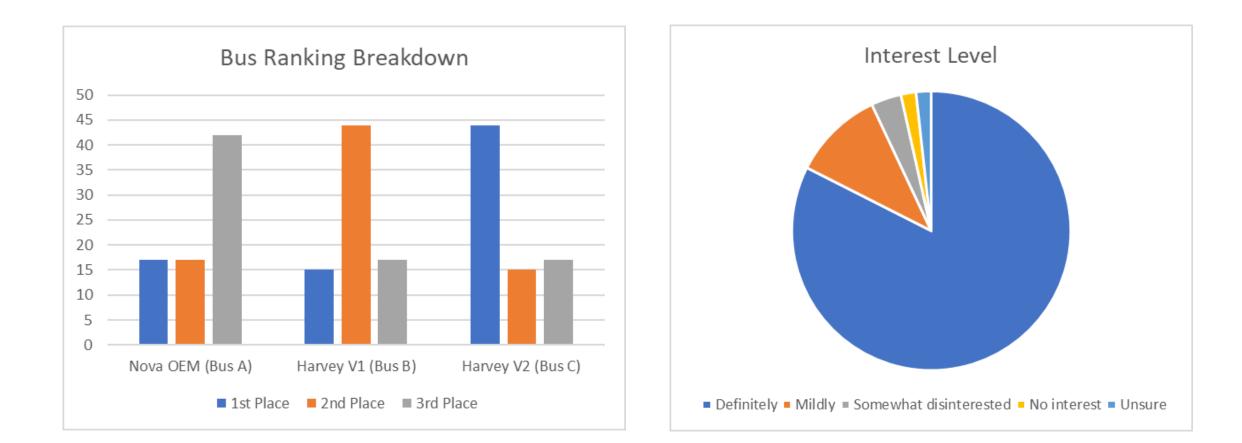


Spotlight: Evaluation Feedback and Results

What do you think of the features on the new barriers?

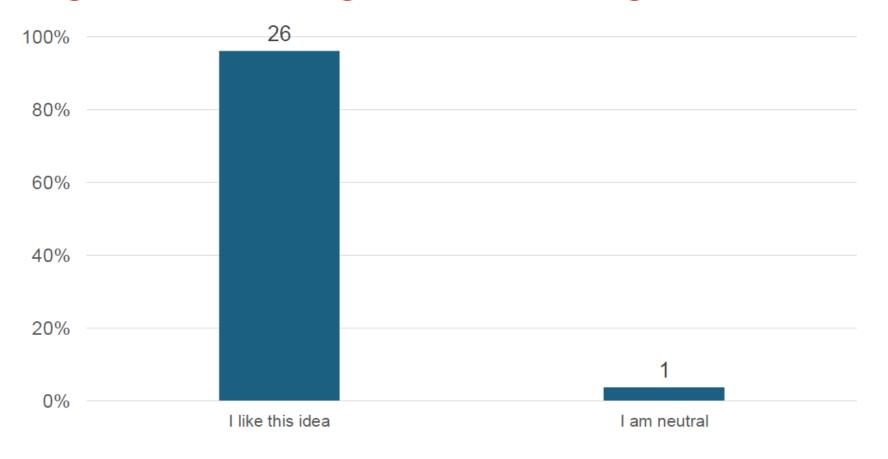


Spotlight: Evaluation Feedback and Results – NOVA Bus



Spotlight: Evaluation Feedback and Results

What do you think of the iterative and consultative approach we are taking in the Bus Design Innovation Program?



Spotlight: Current Design Features



Nova Full & TTC Prototype Barriers

Fully enclosed operator barrier to protect operators from assault while maintaining clear sightlines to the curb side mirror.



Semi-active Seat

Improves ergonomics through enhanced suspension – reduces vibration and fatigue.

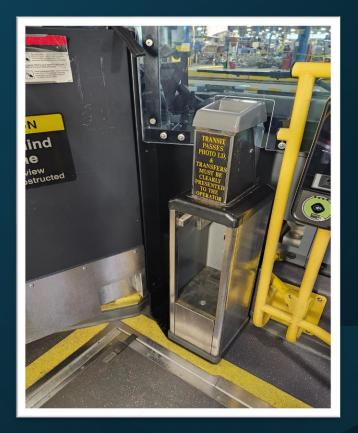


Rear-view and A-pillar Cameras

Aims to enhance sightlines by providing a wider viewing angle and unobstructed views to reduce the risk of collision with vulnerable road users.



Nova Bus Full Enclosed Barrier Fare Box Removed from Drivers Workstation



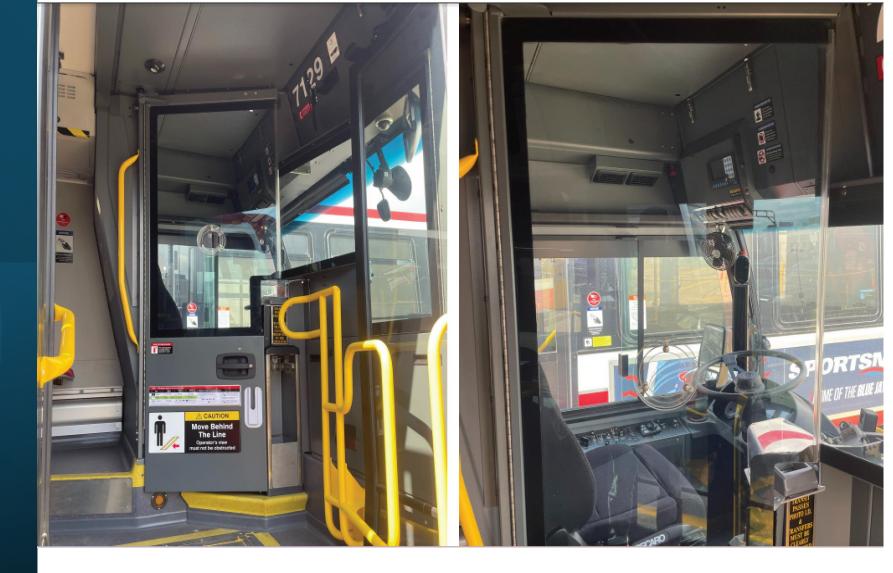




Nova Barrier

Nova Bus Manufacturer





ATU International Design Concepts

Bus Design Innovation Program Recommendation

VANHOOL BUS Bus Design Innovation





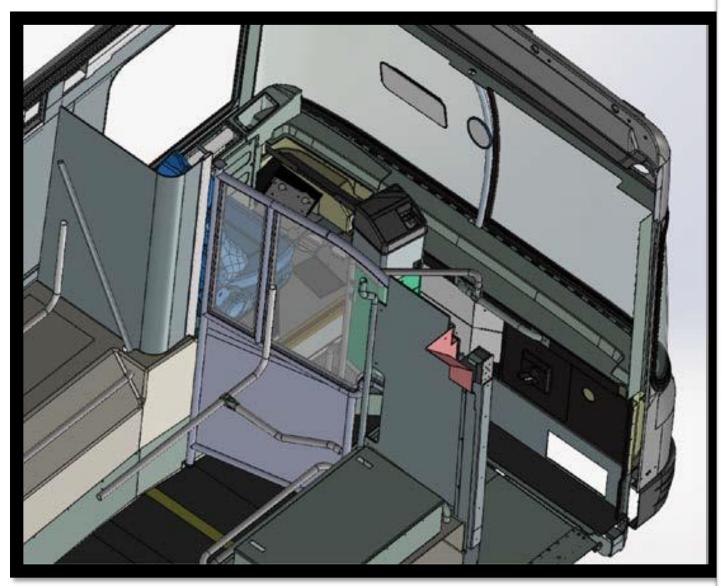
Cockpit Style Barrier Active Semiactive Seat Glass Dash Vertical Air flow

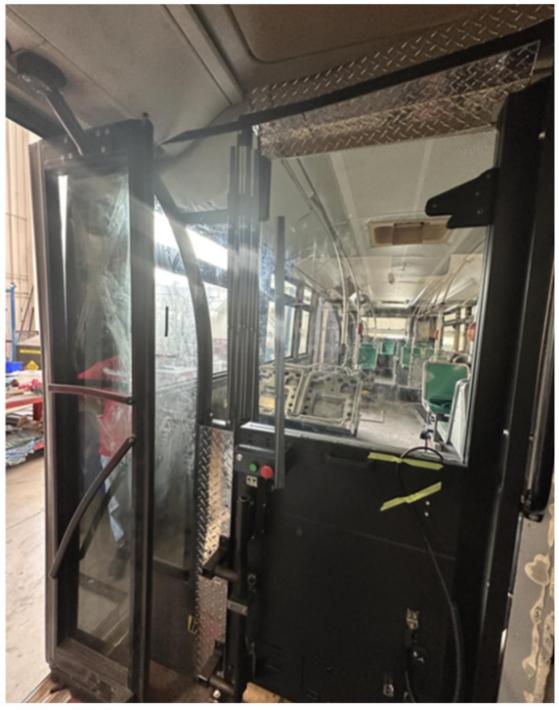




VANHOOL BUS Cockpit Style Barrier







Joining Forces: Organizational Safety Risk Partnerships



Building the BIL Mandated Safety Committee

MTA Joint Safety Committee



Comprised of (7) frontline and (7) management representatives + non-voting Chair



Monthly hybrid meetings to review agency safety risk



Successfully approved two PTASP updates and counting



Viembers receive SMS training 2025 USDOT TSI trainings in Baltimore!



Pictured (left-to-right): Rich Brzozowski (Bus Maintenance, Bush), Katina Mills (Metro Ops), Marcus Calabrese (ACSO - Bus/Mobility), Ken Good (Deputy Chief of Staff), Alexander Houck (Deputy Chief Safety Officer), Ivan Beta Court (Director Bus Field Supervision)

MTA Proactivity & Continuous Improvement

MDOT MTA was recognized from 2014-2017 as having the **safest** transit system out of the top 12 U.S. transit agencies.

Bus operator was shot and killed in October 2020

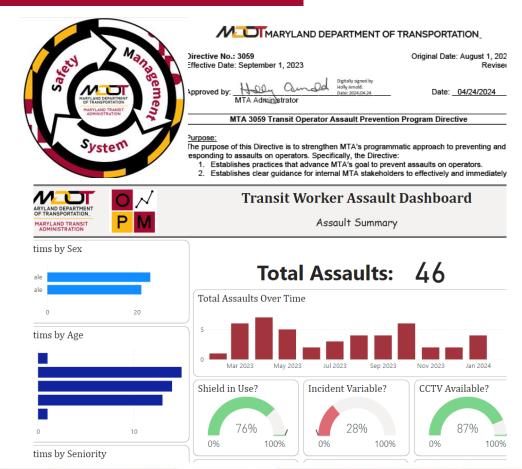
• MTA Administrator called for a Task Force to explore operator assault prevention programs and mitigations.

Agency-approved transit operator assault program directive and SOP completed 2023

• Establishes practices, guidance, and ongoing improvement related operator assault prevention, response, and recovery.

MDOT MTA Operator Assault Task Force has monthly meetings to review:

- Assaults;
- Status of projects and programs to mitigate assaults;
- Other information related to crime clearance rates and vehicle checks with key agency stakeholders.



Part 673 – Safety Risk Reduction Program

Vehicular & Pedestrian Safety Events

• Must consider mitigations to reduce visibility impairments for transit vehicle operators that contribute to accidents, including retrofits to vehicles in revenue service and specifications for future procurements that reduce visibility impairments.

Exposure to Infectious Diseases

 Must consider guidelines to prevent or control exposure to infectious diseases provided by the CDC or a State health authority.

Assaults on Transit Workers

 Must consider deployment of assault mitigation infrastructure and technology on transit vehicles and in transit facilities. Assault mitigation infrastructure and technology includes barriers to restrict the unwanted entry of individuals and objects into the workstations of bus operators.

Setting Safety Performance Targets

MTA followed previous FTA guidance: 5-year average

Modal Directors previously tasked with setting System Reliability Rate

FTA finalized (Feb 2023) new NTD reporting requirements that will collect data on all assaults on all transit workers regardless of injury

MTA JSC now charged with setting SPTs and mitigations for unmet targets





SPT not required until 3 years of data has been reported to NTD. §673.11(7)(iii)(c)

New State & Federal Reporting

MD Legislative Bills

- HB 1049 Chapter 502 and SB 693, effective July 1, 2023, require MDOT MTA to submit annual reports related to assaults on public transit workers.
- First report submitted December 1, 2023.
- Compares aggregated data with at least two other "states" with a review of current transit industry best practices.

FTA General Directive 24-1

- Issued September 2024 to PTASP regulated agencies
- Requires a Safety Risk Assessment to be conducted and to report within 90 days how agency is assessing, mitigating and monitoring assaults.

General Directive 24-1: Required Actions Regarding Assaults on Transit Workers

Federal Transit Administration Office of Transit Safety and Oversight









Michael McMillan

President and Business Agent Amalgamated Transit Union Local 1300



Alexander Houck Deputy Chief Safety Officer Maryland Transit Administration







Thank you!

www.transitworkforce.org

