



Safety and Operations Committee

Board Information Item III-A

**Metro Performance Report
Q1/FY2023**

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:
203405

Resolution:
☐ Yes ☒ No

TITLE:

FY2023/Q1 Metro Performance Report

PRESENTATION SUMMARY:

Highlights from the First Quarter (Q1) Fiscal Year (FY) 2023 Metro Performance Report.

PURPOSE:

Inform the Board of Metro's FY2023 performance from July 2022 – September 2022 on safety and service reliability key performance indicators (KPIs)

DESCRIPTION:

There are no Interested Parties in this matter.

Key Highlights:

- The FY2023 Q1 Metro Performance Report introduces three new measures of service reliability important to customers: the percentage of service that was canceled or missed, the share of scheduled bus trips reporting real-time information, and the accuracy of real-time bus predictions. The report continues to provide data on customer satisfaction, on-time performance, crowding, elevator and escalator availability, and fleet reliability.
- The report includes five safety and security measures that align with federal reporting standards: crime rate, customer injury rate, major safety event rate, customer and employee assault rate, and employee injury rate. All measures are broken out by mode in the report.
- Metro set FY2023 targets in alignment with guidance from the Federal Transit Administration. The targets for the crime rate and customer and employee assault rate aim to improve over performance levels achieved in the last 12-24 months, acknowledging the changing nature and incidence of crime since the pandemic. The targets for on-time performance, fleet reliability, elevator and escalator availability, and

Metrorail missed trips aim to improve over the average performance over the last three to five years, a period bridging the pandemic. The targets for customer satisfaction, customer injuries, employee injuries, and major safety events aim to meet or improve over the average rates over the last five years. No target was set for bus missed trips, bus prediction availability, and bus prediction accuracy since this is the first year Metro is reporting this information.

Background and History:

Metro has publicly reported performance for key operational measures since 2010. The Q1 FY2023 Metro Performance Report highlights performance on a suite of key performance indicators (KPIs) that evaluate how well the agency is delivering its mission to provide safe, equitable, reliable, and cost-effective public transit and meeting the standards the Board has set for safety and service. These KPIs follow industry standards and align to the safety performance measures established in the Federal Transit Administration's National Public Transportation Safety Plan. The report compares performance for the period of July 2022 – September 2023 to the targets that Metro set for the fiscal year. Metro is currently developing a new strategic plan. Once launched, the KPI framework will be updated to align to the new mission, vision, goals and objectives.

Within Metro, this data is used on an ongoing basis to inform decision-making. The Department of Safety (SAFE) utilizes multiple datasets to monitor safety activities that impact employees and the riding public. Within Operations, these measures are actively tracked by staff through a series of "Stat" performance review meetings that encourage data-driven analysis and decision-making. These activities all contribute to Metro's performance-based planning and programming approach.

Discussion:

Customer satisfaction increased by about five percentage points in Q1 FY2023 compared to Q4 FY2022, and ridership was almost 10 percent higher than budget expectations. These positive results reflect continued efforts to address crime, provide consistent wait times on Metrorail as more 7000-series trains are added, and improve the availability of real-time information on bus arrivals. However, performance results are mixed when compared to the targets set for the fiscal year, with results better than target for about half of key performance indicators (KPIs). This indicates there is still room to continuously improve to meet the standards Metro leadership has set for success.

- Performance on six safety measures met target: crime; Metrorail customer injuries; customer and employee assault rate on Metrorail,

Metrobus and MetroAccess; and employee injury rate.

- Performance fell below target for five safety measures: Metrobus and MetroAccess customer injuries; and Metrorail, Metrobus and MetroAccess major safety event rates.
- Performance on six measures of service quality met target: Metrorail missed trips; on-time performance for Metrorail and MetroAccess; fleet reliability for MetroAccess and the Metrorail legacy fleet; and elevator availability.
- Performance on six measures of service quality did not meet target: Metrobus on-time performance, escalator availability, Metrorail 7000-series fleet reliability, Metrobus fleet reliability; and Metrobus and Metrorail customer satisfaction.
- Targets were not set for Metrorail and Metrobus crowding, Metrobus real-time arrival prediction availability and accuracy, the share of scheduled Metrobus service that was canceled or missed, and MetroAccess customer satisfaction.

Metrorail customers received 97 percent of scheduled service, with an average of 92 percent of trips completed on-time (within expected wait and train running times), meeting target. Scheduled track work during middays or late nights accounts for one-third of missed service. The approval to run more 7000-series trains enabled Metro to improve wait times and provide extra capacity during the busiest times; 7000-series trains provided about 15 percent of service during Q1 FY2023. System-wide, crowding increased in September and remains concentrated on the Orange, Green, and Red Lines during rush periods.

Metrobus customers received 98 percent of scheduled service, with real-time information provided for almost 93 percent of trips. Operator availability was the main reason for missed trips, and Metro is aggressively recruiting bus operators with over 130 in training. Staff are implementing upgrades that will remove “ghost buses” from real-time information feeds, only showing data for trips that are known to be running. When predictions are provided, over 86 percent are accurate. Accuracy improves the closer buses get to the stop. Of the service delivered, 77 percent of buses were on-time, just shy of the target of 78 percent. Buses were more likely to be late than early. Now that traffic has returned to pre-pandemic levels, Metro is working to lengthen bus route running times to match current traffic levels and ensure buses stay on schedule.

Elevator availability met target, with 97.7 percent of the 279 units available on average. Escalator availability just missed target, with 92.7 percent of units available on average (compared to the target of 92.9 percent). During the first

quarter, an average of 45 of the 617 escalators in the system were out of service at any time—24 for major rehabilitation or full replacement, which was slightly higher than anticipated.

There were fewer than six Part 1 crimes per million customers in Q1 FY2023, better than target. Property crime – specifically theft on Metrorail – is the most common type of crime. Crimes against persons continue to decrease. In September, MTPD launched “Helping Hands” to add 25 percent more officers in the morning and 15 percent more in the evening, engaging with over 150 employees and riding 130 railcars and 60 buses daily.

Ninety-six customers were injured and required medical attention this quarter, with 60 percent due to slips, trips and falls and 33 percent related to collisions. Most of the injuries were on Metrobus and were related to hard braking by operators in attempts to avoid collisions. Bus operators receive frequent training and coaching to improve safety driving practices. The Metrorail customer injury rate was better than target in Q1 FY2023, while the rates for Metrobus and MetroAccess customer injuries did not meet target. Collisions accounted for 94 percent of Metrobus and MetroAccess major safety events in Q1 FY2023, with higher rates than target. The rate of safety events on Metrorail also missed target, driven by three derailments of work vehicles. None of these derailments resulted in any injuries.

Metro saw progress on reducing assaults in Q1 FY2023. The target was met for the customer and employee assault rate. A decrease in assaults and violence-related stress injuries also led to a lower employee injury rate, meeting target.

FUNDING IMPACT:

There is no impact on funding for presentation of these metrics.	
Project Manager:	Brian Dwyer
Project Department/Office:	Chief Operating Officer

TIMELINE:

Previous Actions	October/2022 – Presentation of Q1-Q4 FY2022 Metro Performance Report
Anticipated actions after presentation	February/2023 – Presentation of Q1-Q2 FY2023 Metro Performance Report

FY23 Q1 Metro Performance Report

REPORT SUMMARY

Safety and Operations Committee
December 8, 2022



Summary



Customer satisfaction is improving, reflecting actions taken to address safety and reliability concerns



- Average service reliability is at or near target and consistent with Q1 FY22



- Crime rate is better than target, with continued decreases in crimes against persons



Silver Line Phase 2 opened November 15



The Metro Customer Experience in KPIs | Q1 FY23

**Customer
Satisfaction**
Page 5

How available and
accurate was real-
time bus info?
Page 7

How often were
elevators/escalators
available?
Page 9

How safe was the
system? Safety
incidents
Page 11

How safe was Metro
for its employees?
Employee injuries
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Ridership
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How often was
service canceled or
missed?
Page 6

How on-time was
Metro's service?
Page 8

How secure was
Metro's system
from crime?
Page 10

How safe was the
system? Customer
injuries and customer/
employee assaults
Page 12-13

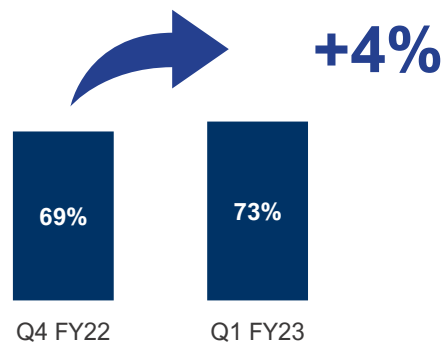
How crowded was
the system?
Page 15

How satisfied were Metro customers with service?

Rail and Bus customer satisfaction rose almost 5 percentage points, reflecting improved reliability and safety; Access satisfaction decreased but remains high

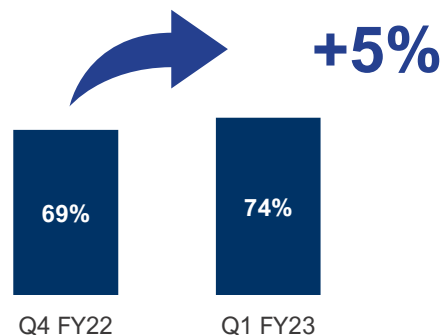
Rail Customer Satisfaction

73% of customers satisfied | target $\geq 79\%$



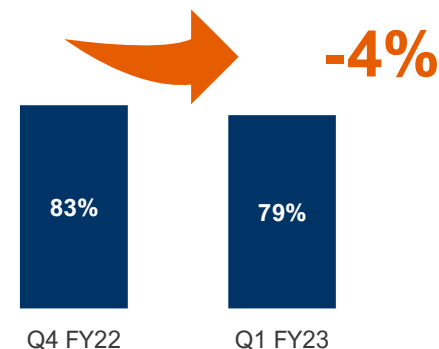
Bus Customer Satisfaction

74% of customers satisfied | target $\geq 76\%$



Access Customer Satisfaction

79% of customers satisfied | target $\geq 90\%$



Doubled 7000-Series trains

6 trains each day in July
12 trains each day in September
decreasing wait times

Operation Helping Hands



Added **25%** more officers in a.m.
15% more officers in p.m.
Riding **130** railcars and **60** buses daily
Engaging with **150+** employees



FROM
118
TO
131

More Metro Access
Call Center agents

How often was service canceled or missed?

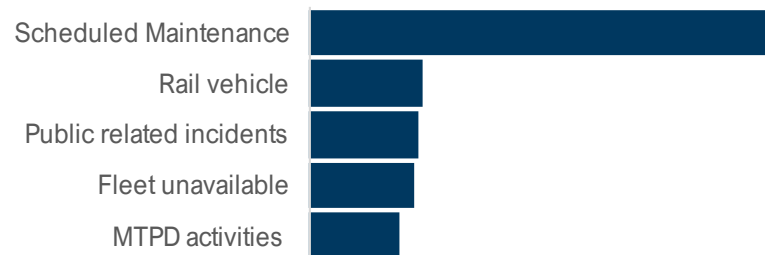
Rail missed 3% of schedule service, with track work leading cause; Bus missed 2% of scheduled trips, mostly due to operator availability



Rail Missed Service

3% of scheduled service missed | Target $\leq 6\%$

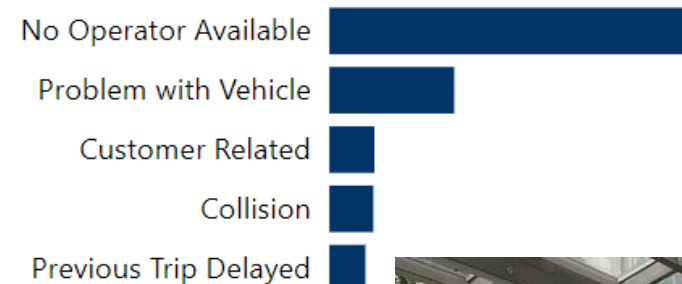
Top five causes of missed stops (not including unknown)



Bus Missed Service

1.8% of scheduled service missed | no target in FY23

Top five causes of missed trips (not including unknown)

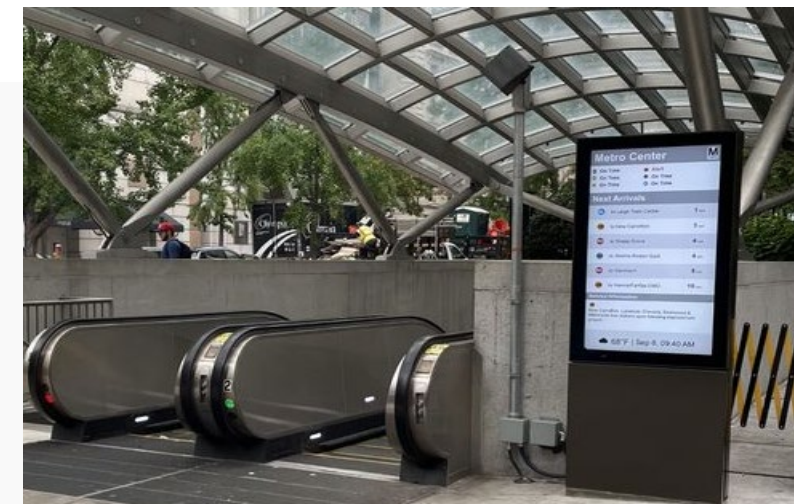


Actions underway to drive improvements

- Held 15+ recruiting events for bus operators; 133 operators in training, goal to recruit 475 more over next year
- Focus on efficiency of overnight track work to minimize amount of maintenance conducted during day

More actions planned in FY23

- Implement software upgrades to improve bus real-time customer information on ghost buses; continuing public messaging for service disruptions of all types



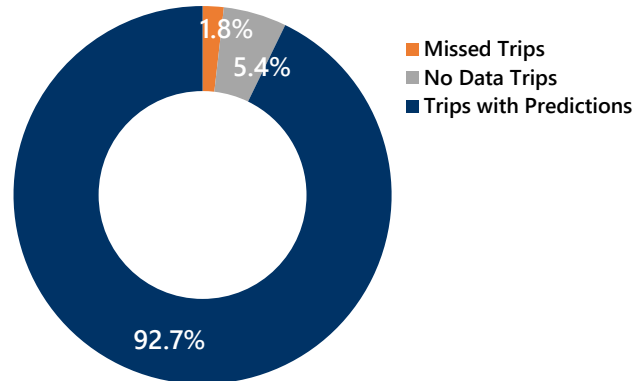
How available and accurate was real-time bus info?

Customers receive real-time arrival predictions for over 9 out of 10 bus trips

Bus Prediction Availability

92.7% (scheduled trips with real-time predictions) | no target in FY23

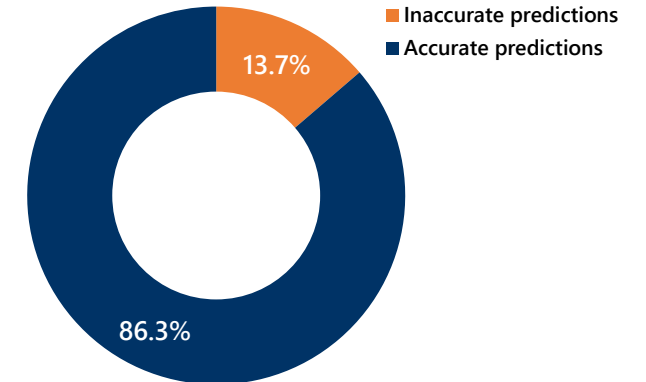
GPS devices that are not logged on or are malfunctioning are the main reason for missing predictions



Bus Prediction Accuracy

86.3% (average accuracy for trips with real-time predictions) | no target in FY23

Predictions are most accurate when buses are close to stops



Actions in Q1 that drove improvements

- Conduct campaigns and coaching to ensure all operators log-on to enable GPS devices, and work with vendor to quickly fix broken units

More actions planned in FY23

- Reduce customer confusion by only showing buses with real-time information in BusETA
- Change predictions for terminal stops from arrival time to departure times to better meet customer needs

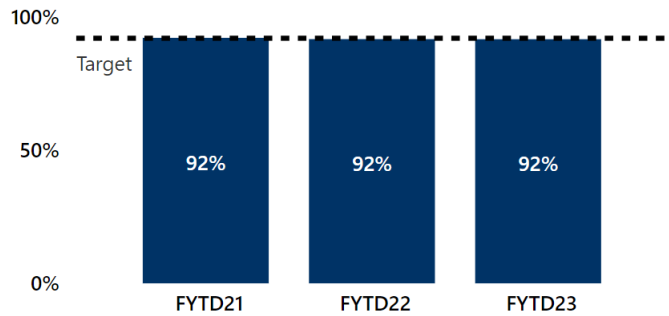
How on-time was Metro's service?

Average service reliability is at or near target, consistent with last year



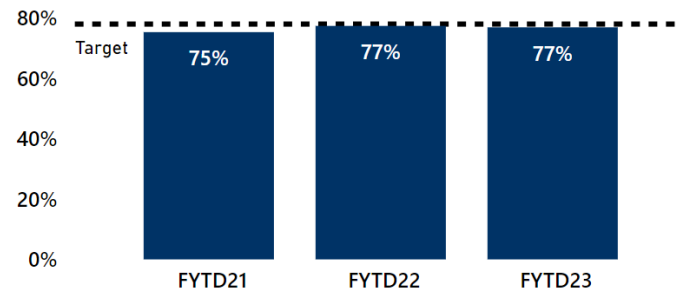
Rail Customer OTP

92% of customer trips within acceptable travel time | target $\geq 92\%$



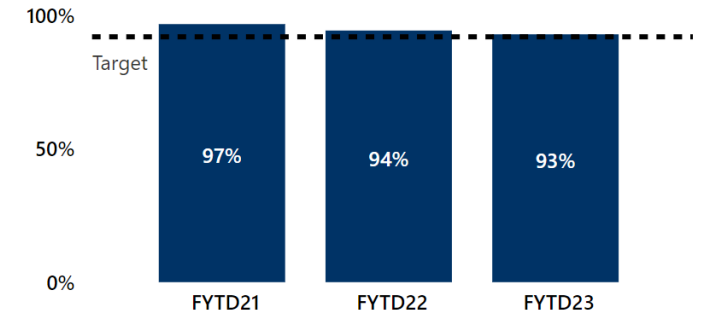
Bus OTP

77% of timepoints delivered on-time | target $\geq 78\%$



Access Customer Pick-Up OTP

93% of customer pick-ups on-time | target $\geq 92\%$



Actions underway to drive improvements

- Reduce wait times for rail customers by doubling number of 7000-series trains
- Repair critical rail infrastructure, ensuring it remains in good condition
- Conduct early departure reduction campaign for bus operators, which can cause customers to miss their bus
- Launch Better Bus to rethink, redesign and revitalize bus service

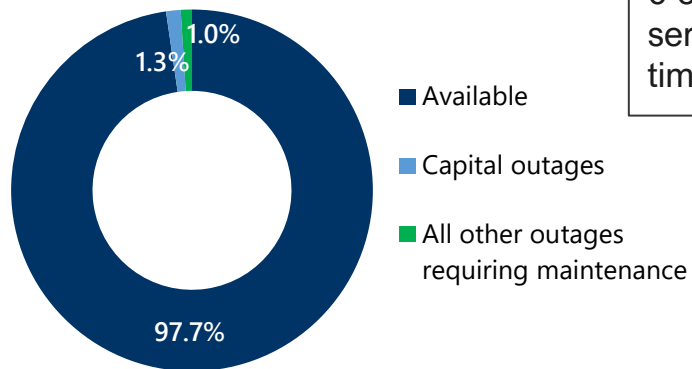


How often were elevators and escalators available?

Rehabs and replacements were main reason for lower escalator availability, with 24 units on average out of service this quarter for capital work (3.8% of the system)

Elevator Availability

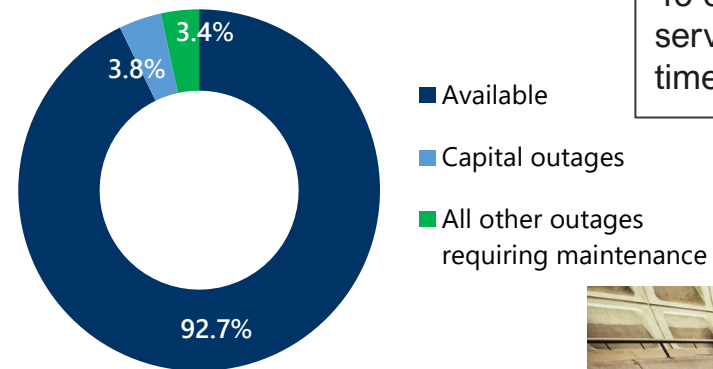
Available 97.7% | target $\geq 97.5\%$



6 of 279 units out of service at any given time in Q1

Escalator Availability

Available 92.7% | target $\geq 92.9\%$



45 of 615 units out of service at any given time in Q1

Actions underway to drive improvements

- Continue current contract to replace 102 elevators started in 2014
- Continue multi-year capital rehab and replacement program to ensure units are in a state of good repair. 70 of the 615 escalators rehabbed or replaced in the last 3 years, with 38 more scheduled for FY23



How secure was Metro's system from crime?

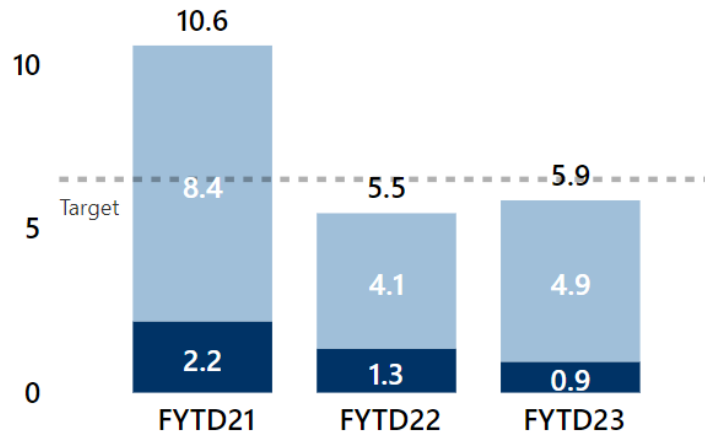
Crime rate was better than target, with theft on Metrorail the most common type of crime



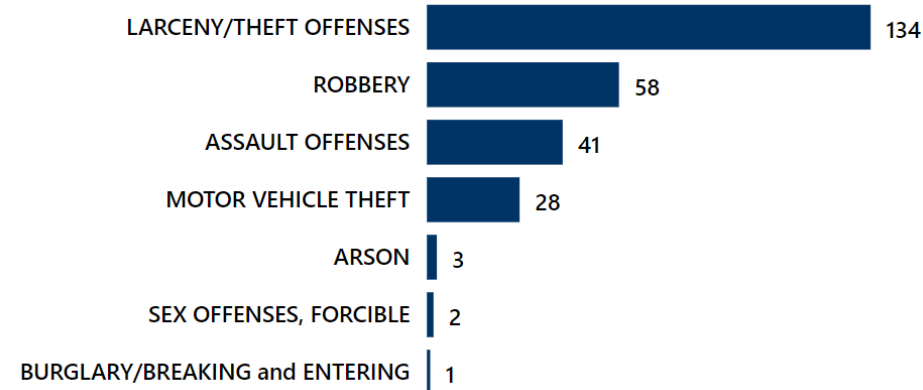
Part 1 Crime Rate

5.8 crimes per million customers | target ≤ 6.5

● Crimes Against Persons ● Crimes Against Property



FY23 Q1 count of crimes by type

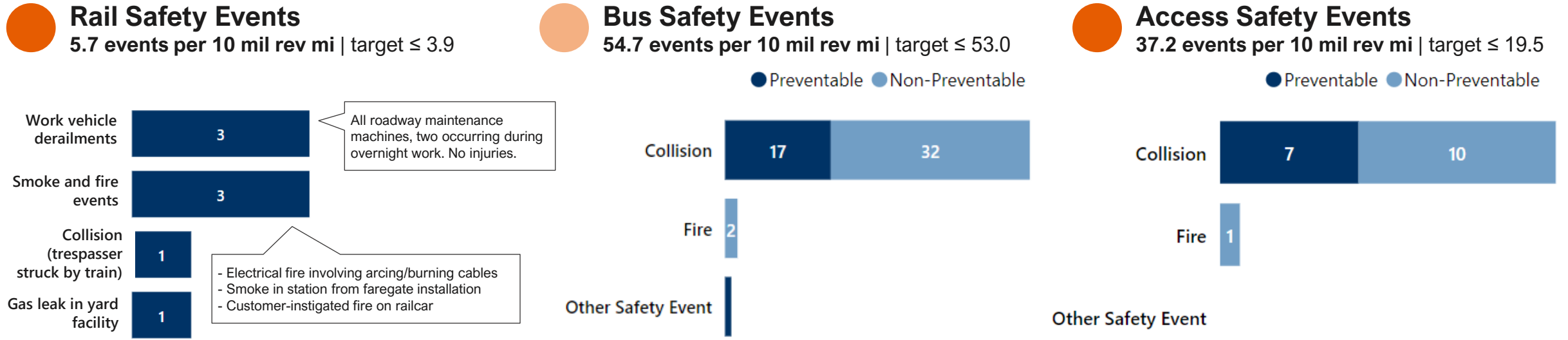


Actions underway to drive improvements

- Operation HelpingHands: 25% more officers in AM and 15% more in PM, engaging with 150+ employees, riding 130 railcars, 60 buses daily
- Recruit four Crisis Intervention Specialists trained in mental health awareness and de-escalation methods

How safe was the system? Major Safety Event Rate

Collisions account for 94% of Bus and Access safety events, with the majority non-preventable. Three derailments of contractor work vehicles in the work zones led to a higher Rail safety event rate



Actions underway to drive improvements

- Clean trackbeds and drains and replace insulators to minimize riskiest electrical fires
- Reduce bus collisions by identifying 1) trends in driver behavior and 2) intersections/corridors with multiple crashes to create safety interventions
- Launched MetroAccess safety campaign “Incident Free in ‘23!”. Held 2-day safety summit with contractors, SAFE, and OCC representatives to align safety strategy and actions

How safe was the system? Customer Injury Rate

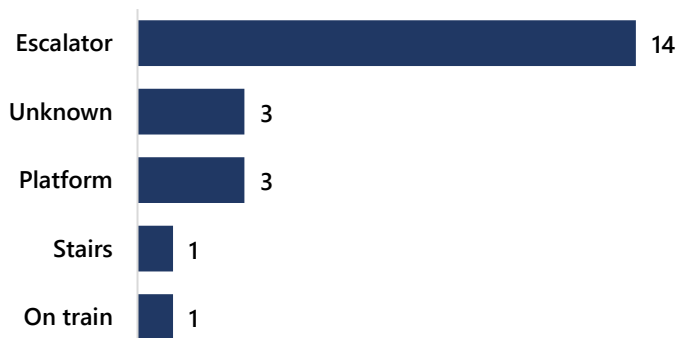
Slips, trips, and falls account for 60% of customer injuries



Rail System Customer Injuries

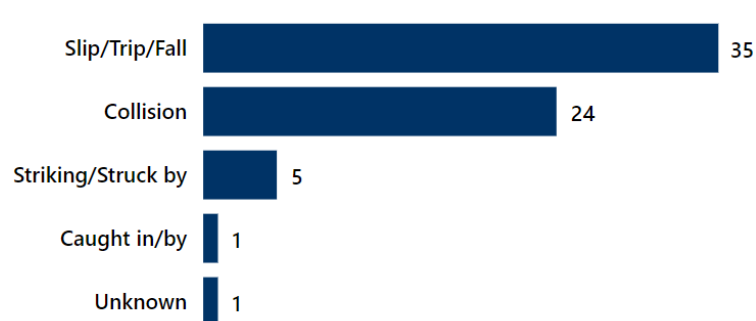
15.7 injuries per 10 mil rev mi | target ≤ 20.6

Slip/trip/falls location within system



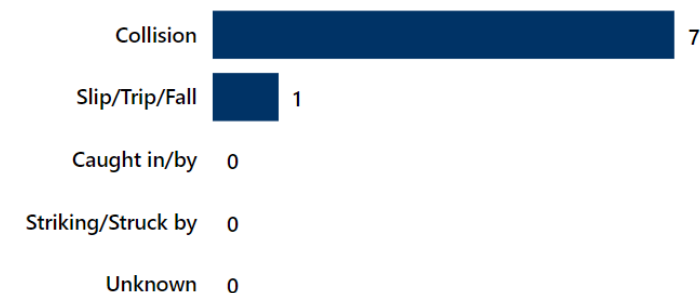
Bus Customer Injuries

69.4 injuries per 10 mil rev mi | target ≤ 56.4



Access Customer Injuries

16.6 injuries per 10 mil rev mi | target ≤ 15.6

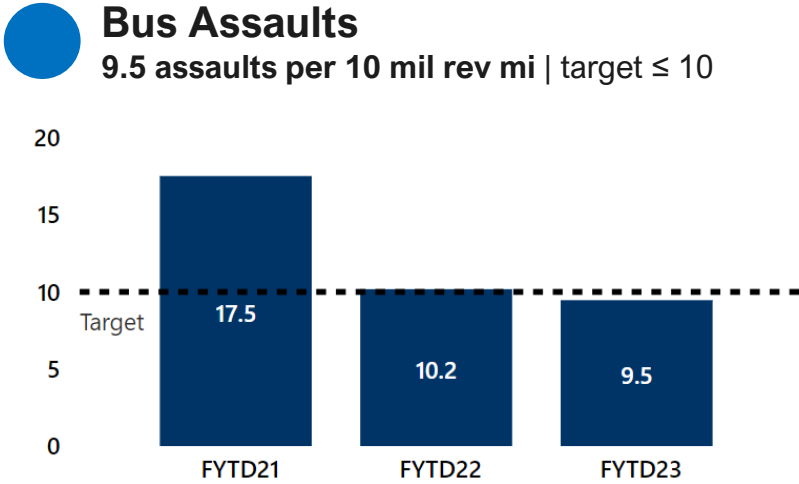
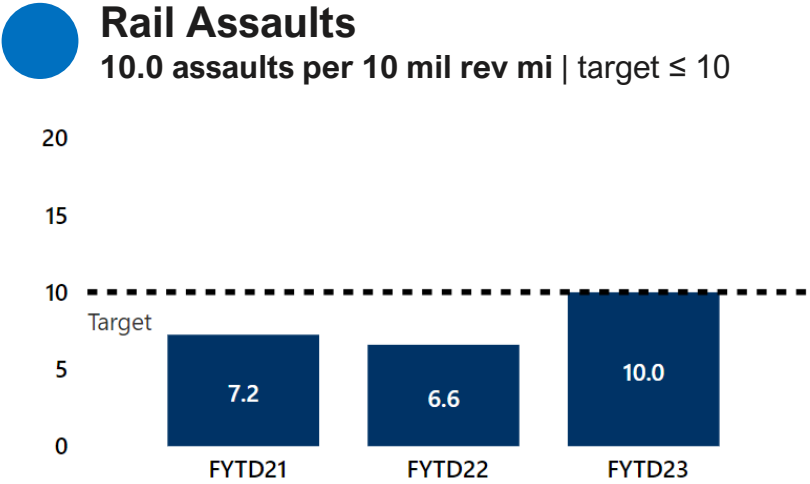


Actions underway to drive improvements

- Completed four-year, 20-station Platform Improvement Project in early September; included safety enhancements such as slip-resistant tile
- Pilot new escalator signage at select rail stations
- Conduct safety campaign to coach bus operators to practice driving behaviors that prevent hard braking, which mitigates both customer falls and collisions
- Review MetroAccess contractor fatigue protocols and trainer qualifications
- Add DriveCam behavioral recognition and alerting capability to MetroAccess fleet
- Implement Safety Management System

How safe was the system? Customer & Employee Assault Rate

Assault Rate is at or below target for all three modes in Q1 of FY23, with seven employee assaults and 16 customer assaults, and 0 assaults for MetroAccess



of Assaults FYTD23

Mode	Employees Assaulted	Customers Assaulted
Bus	3	6
Rail	4	10
Total	7	16

Actions underway to drive improvements

- Train all new bus operators and station managers in de-escalation techniques
- Increase visibility of MTPD officers on bus routes and station platforms with high occurrences of crime

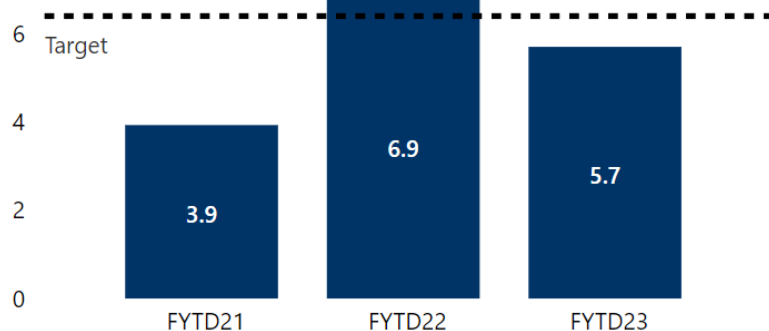
Note: this measure uses the FTA definition of assault, which is an unlawful attack on another person resulting in someone being transported from the scene for medical attention



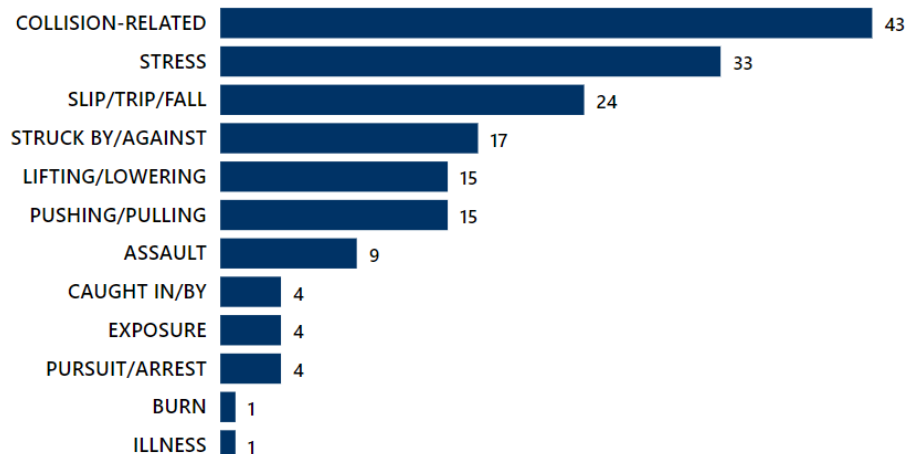
How safe was Metro for its employees?

The employee injury rate was below target for Q1 of FY23, driven by a decrease from last quarter in struck by/against, stress, and assault injuries

Employee Injury Rate 5.7 injuries per 100 employees | target ≤ 6.4



OSHA-recordable Injury Types | Current Quarter



Actions underway to drive improvements

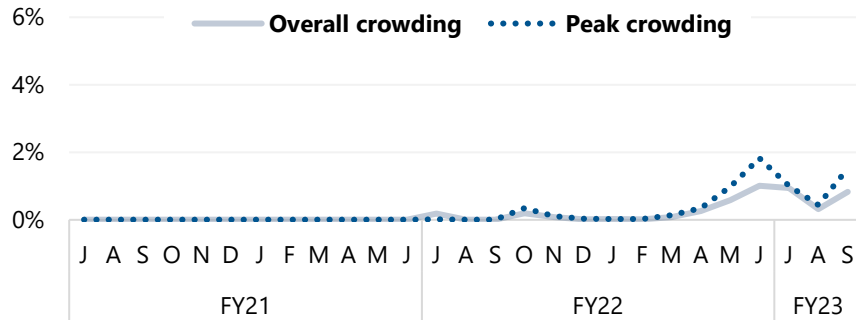
- Reduce collisions by identifying trends in driver behavior and intersections or corridors with multiple crashes to create safety interventions
- Train all new bus operators and station managers in de-escalation techniques
- Increase police presence on Metrobus and Metrorail through Operation HelpingHands

How crowded was the system?

Q1 increases in ridership drove increases in crowding for both rail and bus

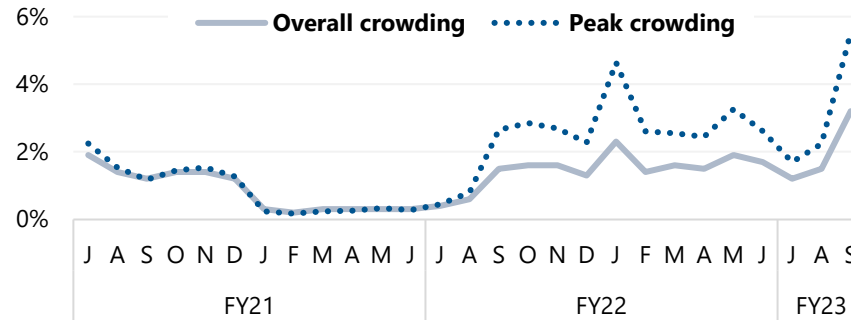
Rail Crowding

.7% of passenger time in crowded conditions (>100 passengers per car) | no target in FY23



Bus Crowding

2% of passenger time crowded conditions (> 40 passengers per bus) | no target in FY23



Fall increases in ridership (school, return to work, tourism) led to more crowding on Bus and Rail. Reduced frequencies lingering from fewer 7000-series trains led to more packed rail cars, especially during peak hours.

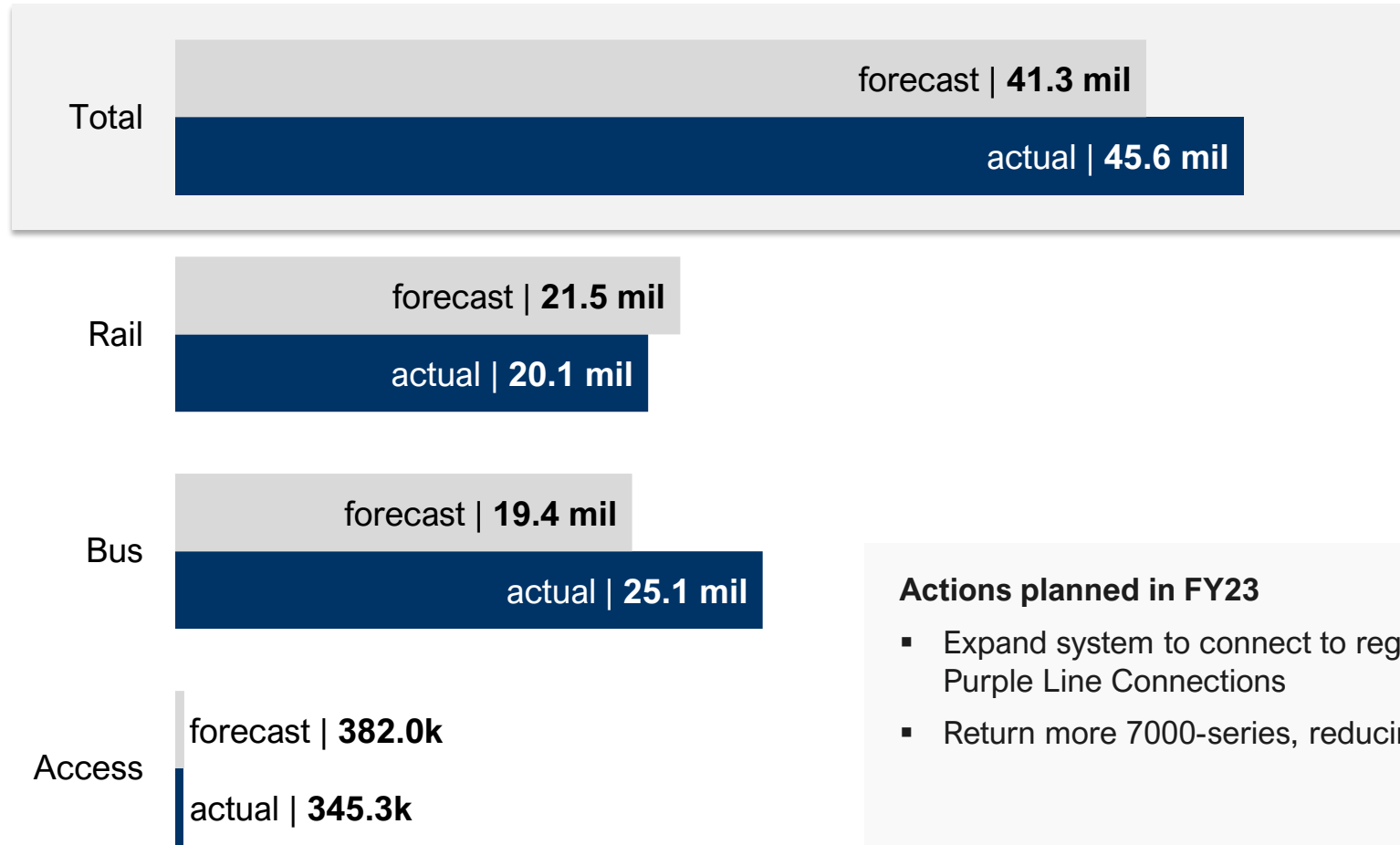
Actions planned in FY23

- Add frequency at busiest times as more 7000-series trains return to service
- Restore frequency in December to bus routes that had previous service reductions



What was ridership in Q1?

Metro carried over 500,000 passengers per weekday in September, about 60% of pre-pandemic ridership



Actions planned in FY23

- Expand system to connect to region's transportation network: Silver Line, Potomac Yard, Purple Line Connections
- Return more 7000-series, reducing wait times



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

PERFORMANCE REPORT

FY2023 Q1

July - September 2022

Published December 5, 2022

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MESSAGE FROM THE GENERAL MANAGER/CEO



Randy Clarke

General Manager & Chief
Executive Officer, WMATA

On November 2, I completed my first 100 days as General Manager and CEO of Metro. With close to 250 trips on the system, I have enjoyed connecting with customers and employees and observing first-hand the dedication of our team to deliver the safe, frequent, and reliable transit this region deserves.

We are a system owned by and operated for our community, so transparency about our performance is paramount. This report provides data for the first quarter of fiscal year 2023 (FY23), from July 1 through September 30, 2022. One of the results that I'm most proud of: the four percentage-point increase in customer satisfaction for Metrorail and five-point increase for Metrobus. While we are still short of where we want to be, these results reflect the team's hard work at pushing improvements toward safety and reliability.

Our team is working to finalize a comprehensive Strategic Transformation Plan that turns feedback and ideas from our customers, employees, Board, and regional partners into a clear vision and action for the organization to move forward. We've started implementing improvements in the areas that we know are important, and I'm pleased to include updates here on our progress.

Addressing fare evasion

Fare recovery is a major issue. Customers, Metro staff, and Metro Board Members all mention it as a top concern during our discussions. During the first quarter of FY23, we estimated that about 13 percent of Metrorail customers and 45 percent of Metrobus customers did not pay their fare. Revenue from fares allows Metro to keep buses, trains, and paratransit serving our community.

At the beginning of October, we took steps to improve these results. We launched a warning campaign to alert people who neglect to pay fares that there are fines associated with fare evasion in each jurisdiction. The Metro Transit Police Department (MTPD) began issuing fare evasion citations on November 1, 2022, and staff have begun testing faregate modifications as a preventative measure. Additionally, Metro is partnering with the District of Columbia to pilot a low-income fare product.

Enhancing real-time customer communications

The most frequent complaint we receive from our customers is buses not showing up when expected. For the first time, we are monitoring and reporting on the availability and accuracy of our real-time information for Metrobus, showing that we're missing information for just over 7 percent of scheduled bus trips. When we do provide estimated arrival times, about 86 percent are accurate.

In October, we shared with the Board that we will adjust our real-time busETA website (<https://busETA.wmata.com>) to only show information for buses that are verifiably in service, reducing confusion for customers. Currently, busETA shows scheduled data for buses with missing real-time location information. Oftentimes these buses are not in service, or are prevented from serving all or some stops on a route, resulting in a phenomenon called “ghost” buses. Removing them from busETA will give customers the confidence to plan their trips. Staff are also working on software upgrades that allow proactive updates to customers when a trip is cancelled due to operator availability or vehicle breakdowns.

Expanding the system to connect customers to the region’s transportation network

Ridership exceeded projections by almost 10 percent during Q1 of FY23, as workers and students continued to return to the system. We made progress on our two projects to expand the Metrorail system to provide access to even more destinations:

After eight years of construction, we opened the final six stations of the Silver Line on November 15, 2022, providing a direct ride to Washington Dulles International Airport—where more than 600 flights arrive and depart each day—and officially extending the system into Loudon County. During the first day of revenue service, we had roughly 7,820 total trips (entries and exits) at the six new stations.

From September 10 through early November, we completed the installation of track, traction power, and automatic train control systems for the new Potomac Yard station. We are working towards a 2023 opening, with crews now focused on completing the east retaining wall, paving access roads, and installing interior features at the station, such as fare gates, fare machines, and the station manager kiosk.

Delivering more frequent service

Frequent, reliable service is the top priority for customers. During the first quarter, 92 percent of Metrorail customer trips were on-time, 77 percent of buses were on-time, and 93 percent of MetroAccess customers were picked-up on time. On Metrobus and MetroAccess, this is a continuation of the service quality we provided in FY22. For Metrorail, it represents a substantial improvement.

In September, we doubled the number of 7000-series trains in service each day, from about eight to 16. We’ve used these additional trains to open the Silver Line extension and add capacity to other lines, running up to 29 7000-series on some days in November. Customers will continue to see more improvements throughout the second quarter, thanks to approval from the Washington Metropolitan Safety Commission on October 25 to place additional 7000-series trains in service.





By late December, we will have enough trains in service to reduce wait times on our most crowded lines, with a full return to 10-minute headways during rush hour on all lines in May 2023.

We missed about 2 percent of scheduled bus trips during Q1, and in September had to temporarily reduce frequency on five Metrobus routes due to operator shortages. The Metro team is aggressively hiring 100 bus operators to fill our current deficit and enable us to restore service on these lines in December.

In July, we started working on the region's first comprehensive redesign of the entire Metrobus network since its creation in 1973. As part of this effort, we'll support our partners in Prince George's County (TheBus) and the City of Fairfax (CUE) in redesigning their local bus networks. The redesign will provide the opportunity to reassess regional travel patterns and bus frequency, and create a more equitable transit network that better serves the needs of our various communities, including essential workers. This includes coordinating service with bus priority investments—like bus lanes and transit signal priority—across the region. We have an aggressive plan to complete the redesign in 18 months, with implementation beginning in calendar year 2024.

Keeping stations safe, secure, and clean

During the first quarter, crime met target with fewer than 6 crimes per million customers. In September, we launched three major projects aimed at building a safe, secure customer experience:

- We embarked on a seven-week “clean sweep” program focused on rail stations and bus transit enters to repair lights, clean windowpanes, clean granite and tile floors, remove graffiti, pressure-wash benches and bus shelters, paint, and complete other housekeeping.
- We launched Operation HelpingHands, which enhanced police visibility by having officers ride trains and buses more frequently. We also have more than 8,000 regularly monitored cameras, further helping keep watch over the system.
- We began recruitment of four Crisis Intervention Specialists trained in mental health awareness and de-escalation methods. Since the pandemic, MTPD has seen a 40 percent increase in people in need of mental health assistance. While officers are there to aid the public, they are not trained mental health experts. These new civilian roles will work with MTPD and operating staff to provide the appropriate crisis response and community resources.
- We began recruitment for up to 25 Customer Experience Liaisons to provide additional customer support on platforms and in stations.



Upgrading the system to improve reliability and safety

Investments in keeping assets in a state of good repair are an important step to ensure our system is safe and reliable. In early September, major rehabilitation of the Yellow Line Tunnel near L'Enfant Plaza Station and the bridge across the Potomac River began, continuing through May 2023. Metro's chief engineer has identified the steel-lined tunnel near L'Enfant Plaza as the agency's top structural priority, with repairs needed to strengthen the tunnel lining and stop water intrusion, which can lead to arcing and fire events. Metro will also remove and replace miles of critical communications cables used by multiple jurisdictions and repair the Yellow Line Bridge during the closure.

The next quarterly report will be out in February. We'll track the impact of these efforts on our performance, provide additional details on the Strategic Transformation Plan, and share an update on the dashboard we're building to improve transparency, featuring detailed information about missed trips, on-time performance, and prediction accuracy at the route and trip level.

We are honored to service this community and thank you for your continued support. We'll see you on your next ride!



ABOUT THIS REPORT

The Washington Metropolitan Area Transit Authority's (Metro) Performance Report highlights Metro's fiscal-year-to-date performance on a suite of measures that look retrospectively at how well the agency is delivering its mission to provide safe, equitable, reliable, and cost-effective public transit. These measures follow industry standard and align to the safety performance measures established in the Federal Transit Administration's National Public Transportation Safety Plan. Metro updates performance targets for its measures annually, reflecting the priorities, investments, and improvements anticipated for the coming year. The report communicates performance results relative to these targets, shows performance trends over the prior two years, and identifies actions that staff are taking to continuously improve.

Colored indicators throughout the report show each measure's FY results against target:

● Target met ● Target at risk ● Target missed

ABOUT METRO

Metro is one of the largest transit organizations in the United States. Formed in 1967 under an interstate compact among the District of Columbia, the State of Maryland, and the Commonwealth of Virginia, the Metro service area is approximately 1,500 square miles, with a population of approximately four million people. Metro provides three core transit functions: Metrorail, Metrobus, and MetroAccess paratransit. Prior to the pandemic, average weekday passenger trips combined on all three modes totaled approximately one million.



Q1 Scorecard: The Customer Experience Measured

In Q1 of FY23, Metro met
12 of the 24 measures
with FY23 targets
featured in this report

Metro Ridership | page 9

Metro Customer
Satisfaction | page 10-11

- RAIL
- BUS
- ACCESS

- Target met
- Target at risk
- Target missed
- No target



How much of my service was canceled or missed?
page 12-13

- RAIL MISSED TRIPS
- BUS MISSED TRIPS

How often am I getting accurate real-time arrival
info? page 14-15

- BUS PREDICTION AVAILABILITY
- BUS PREDICTION ACCURACY

How reliable is my service? page 16-18

- RAIL CUSTOMER ON-TIME PERFORMANCE
- BUS ON-TIME PERFORMANCE
- ACCESS ON-TIME PICK-UP PERFORMANCE

How often are elevators and escalators out of
service? page 19-20

- ELEVATOR AVAILABILITY
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How crowded is it when I normally travel? page
21-22

- RAIL CROWDING
- BUS CROWDING

How reliable is Metro's fleet? page 23-25

- RAIL FLEET RELIABILITY:
- 7000-SERIES | ● LEGACY SERIES
 - BUS FLEET RELIABILITY
 - ACCESS FLEET RELIABILITY

How safe is Metro's system from crime? page 26

- PART 1 CRIMES

How safe is my ride? page 27-33

- SYSTEM SAFETY EVENTS:
- RAIL | ● BUS | ● ACCESS
- CUSTOMER INJURIES:
- RAIL | ● BUS | ● ACCESS

How safe is Metro for its employees? page 33-36

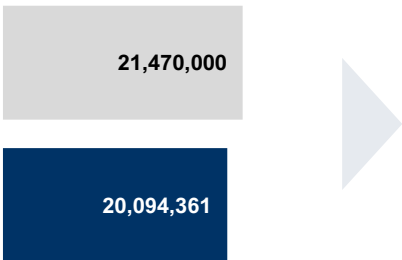
- NTD-REPORTABLE ASSAULTS:
- RAIL | ● BUS
- EMPLOYEE INJURIES:
- RAIL | ● BUS

Total



Metro carried 45.6 million riders across Rail, Bus, and Access in Q1 of FY23, 10 percent above the forecast of 41.3 million and a 36 percent increase from the same period in FY22. Metrobus ridership accounted for 55 percent of total ridership, exceeding Metrorail ridership by over 5 million riders. September 2022 was the highest ridership Metro has seen since March 2020 (the beginning of the pandemic), at 60 percent of ridership in September 2019.

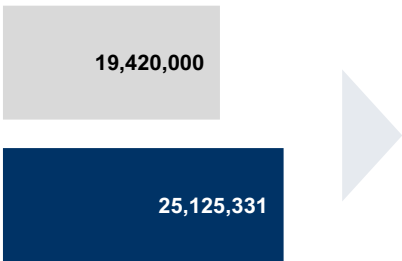
Rail



Metrorail
In Q1 of FY23, 20.1 million passengers rode Metrorail, six percent below the forecast, but a 43 percent increase over the same period in FY22. Rail ridership this quarter has returned to about 46 percent of pre-pandemic ridership in the same time period. Rail ridership in September was 6.8 million, the highest out of the three months in Q1.

Average weekday ridership in Q1 of FY23 was 250,200 and average weekend ridership was 145,700, an increase of 47 percent and 28 percent respectively from the same time period last year.

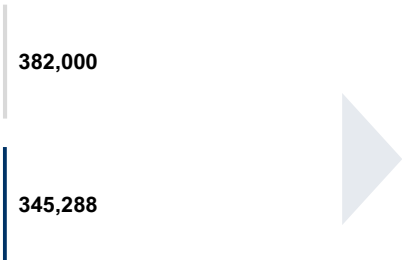
Bus



Metrobus
In Q1 of FY23 over 25 million passengers rode Metrobus, 29 percent over the forecast and a 32 percent increase over the same period in FY22. Ridership increased month-over-month this quarter, with September at 8.8 million riders. Pre-pandemic ridership was around 10 million passengers per month.

Average weekday ridership in Q1 of FY23 was 275,300 and average weekend ridership was 150,000, both a significant increase from the same time period last year.

Access



MetroAccess
In Q1 of FY23, MetroAccess ridership was 345,000, 10 percent under the forecast and four percent more than the same period in FY21. Ridership remained stable in the first three months of FY23, ranging between 111,000 and 118,000 passengers per month. Pre-pandemic ridership was around 200,000 passengers per month.

Average weekday ridership in Q1 of FY23 was 4,400, about the same as FY22.

Metro’s [Ridership Data Portal](#) provides ridership data since 2010, including during the pandemic. Engage with the data through interactive dashboards using the Data Viewers ([Rail](#), [Bus](#), [Parking](#))

CUSTOMER SATISFACTION

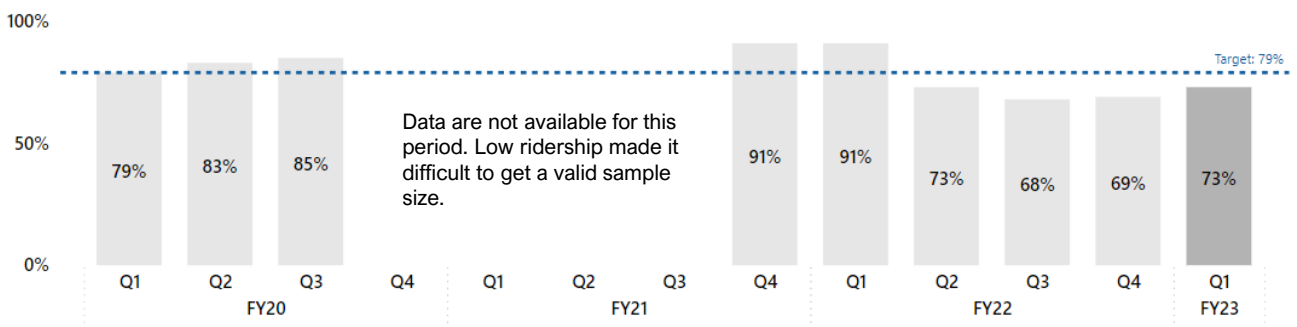
73% customer satisfaction for Metrorail in Q1, missing target of no less than **79%**

Metrorail customer satisfaction improved over the last two quarters, correlating with increases in train frequency that have led to shorter wait times. Long wait times are the top concern for customers, so satisfaction should continue to improve as Metro restores frequency while adding more 7000-series trains.

Measure Details: What and Why
Customer satisfaction is a gauge of Metro's service quality and a key driver of ridership. It helps Metro leadership understand the impact of its service improvement efforts, and overall public sentiment of Metro. The FY23 targets were set to achieve the 5-year average satisfaction level.

Customer Satisfaction against dotted line target

Y: % of customers who were satisfied with their last Metrorail trip | X: quarter
Direction of desired performance: **up**

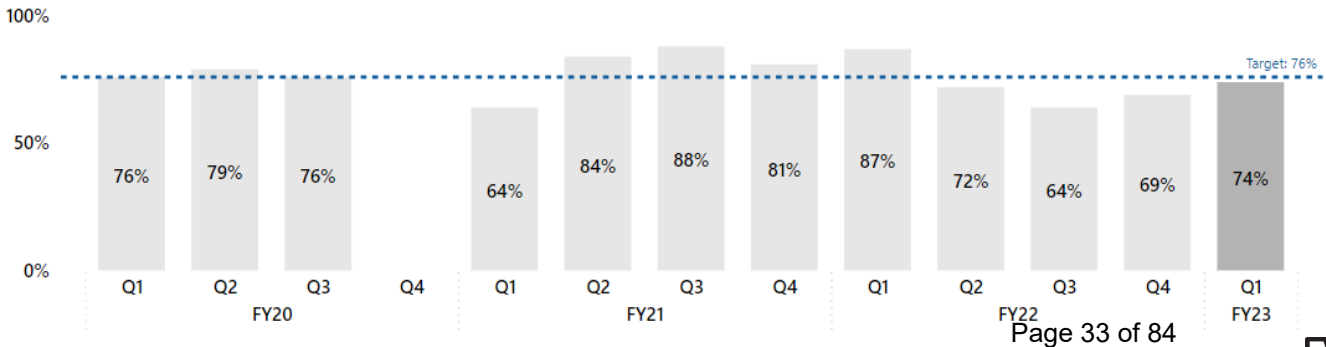


74% customer satisfaction for Metrobus in Q1, missing target of no less than **76%**

Bus customer satisfaction is approaching levels seen pre-pandemic, increasing from its lowest point in Q3 of FY22 when COVID-related operator shortages led to service cuts. The increase this quarter is a result of shorter wait times, better service reliability, and improved cleanliness. To continue to improve, customers suggest focusing on addressing crime and safety aboard vehicles. Metro Transit Police have begun deploying more officers to ride buses.

Customer Satisfaction against dotted line target

Y: % of customers who were satisfied with their last Metrobus trip | X: quarter
Direction of desired performance: **up**



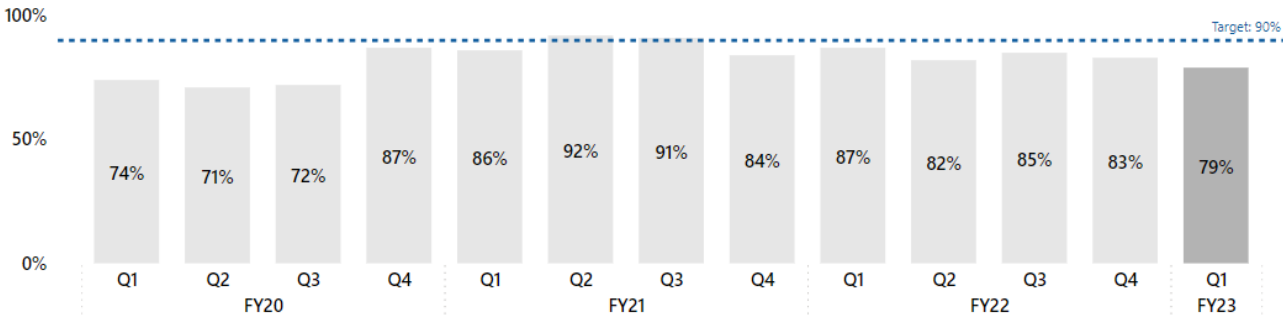
CUSTOMER SATISFACTION (CONTINUED)

79% customer satisfaction for MetroAccess in Q1, missing target of no less than **90%**

MetroAccess customer satisfaction has regularly been the highest among Metro's three modes. Satisfaction fell in Q1 following the increase in shared rides, which had been suspended during the pandemic to enable social distancing. Concerns with how operators are routed during trips remained a cause of dissatisfaction, and Q1 also saw lower satisfaction with dispatcher courtesy and ease of making a trip reservation. To help improve response times, the call center onboarded 20 new reservation agents and 11 new dispatch/Where's My Ride between June and August, increasing total staff by 11 percent.

Customer Satisfaction against dotted line target

Y: % of customers who were satisfied with their last MetroAccess trip | X: quarter
Direction of desired performance: **up** 



RAIL MISSED TRIPS

3% of scheduled rail service missed, meeting target of no more than 6%

Single-tracking and reduced frequencies due to weekday evening and midday track work account for almost one-third of missed rail service, followed by rail vehicle and public-related incidents such as medical emergencies. About 10 percent of these missed stops were due to operator or train availability.

Measure Details: What and Why
Missed Service monitors Metro's "guarantee of service"—whether Metro is providing all the service that was scheduled and committed to. The target was set to improve over the average performance from FY20-FY22, which was 7 percent.

Rail Missed Trips against dotted line target

Y: % of rail service delivered | X: month
Direction of desired performance: **down** ↓

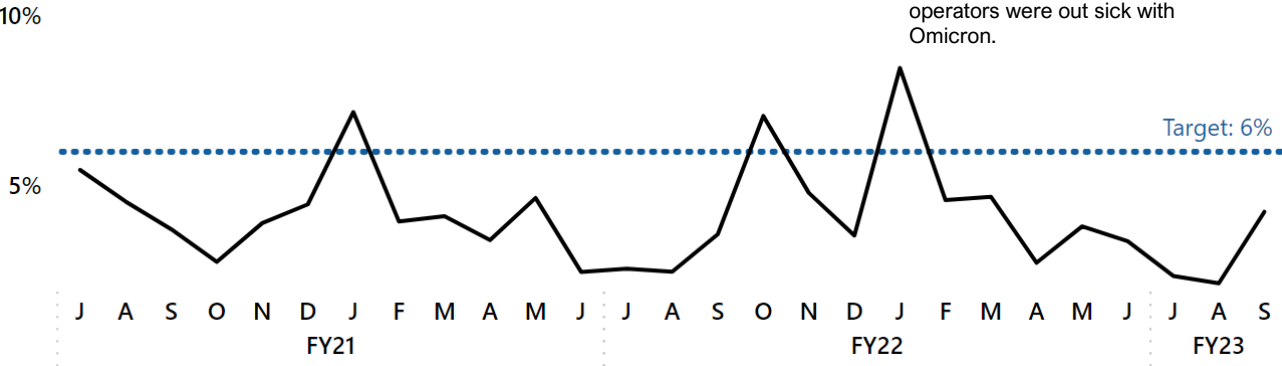


Chart takeaway | Missed trips spiked in January 2022 when more operators were out sick with Omicron.

Metro continues to invest in keeping track, signaling, and traction power assets in a state of good repair to ensure safety and reliability for customers. Staff actively work to identify opportunities to improve the efficiency of overnight track work to minimize the amount of maintenance conducted during the day. Metro is also currently recruiting Customer Experience Liaisons, who will be available to assist during public-related incidents, enabling faster resolution.



BUS MISSED TRIPS

1.8% of scheduled bus service was missed (no target in FY23)

“No shows” are the most frequent complaint received by Metrobus customers. Operator availability—due to absences, vacancies, or emergencies—is the top reason for missed trips. Vehicle reliability is the second most common reason.

Measure Details: What and Why
Missed Service monitors Metro’s “guarantee of service”—whether Metro is providing all the service that was scheduled and committed to. FY23 is the first year Metro has been able to aggregate all data sources needed to accurately report bus missed trips. Due to the lack of historical data to identify trends, no target has been set for FY23.

Causes of Bus Missed Trips (excluding unknown)

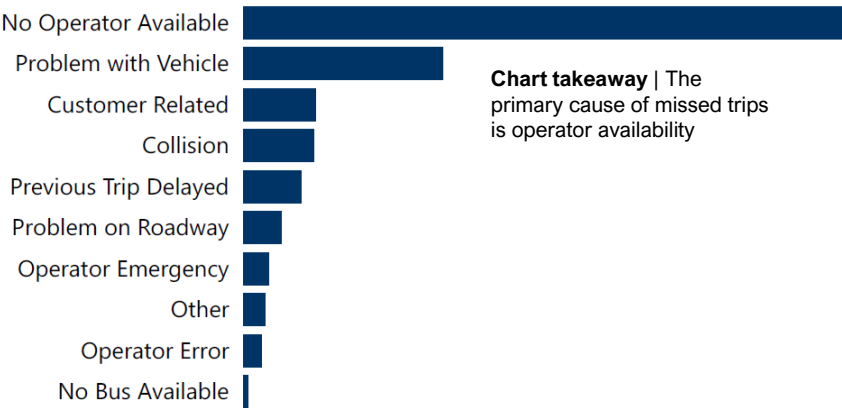


Chart takeaway | The primary cause of missed trips is operator availability

Missed trips happen in two ways: the bus never leaves the depot to deliver service, or the bus is out on the road and service is interrupted due to collisions, mechanical issues, customer medical emergencies, or issues on the road such as police activity. Operator availability is the primary reason the bus never leaves the depot and the largest driver of missed trips overall. A nationwide shortage of bus operators along with elevated absenteeism due to pandemic-related illness exacerbate this trend.

Metro is actively working to recruit bus operators with over 15 recruitment events so far this year. As of November 2022, 133 new operators are in training with the goal of recruiting 475 more by the end of FY23. Additionally, Metro is implementing software upgrades to improve real-time information and will continue to send out public alerts for service disruptions of all types.



BUS PREDICTION AVAILABILITY

92.7% of scheduled trips with real-time prediction data (no target in FY23)

Bus prediction availability measures the share of scheduled trips for which Metro provides real-time arrival predictions. Metro’s tool busETA—along with third-party applications (apps) like Google Maps, Apple Maps, or Transit—display this prediction info. Most apps that customers use to check bus arrival times show schedule data if real-time predictions are unavailable.

Measure Details: What and Why
Customers rely on predictions in busETA or other third-party applications to plan their trips when taking Metrobus. Real-time location data is used to predict arrival times when the bus is running ahead or behind schedule. FY23 is the first year that Metro began archiving its prediction data. Due to the lack of historical data to identify trends, no target has been set for FY23.

Bus Prediction Availability in FY23 Q1

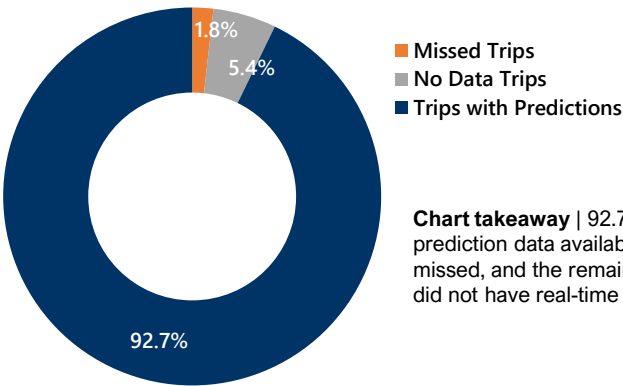


Chart takeaway | 92.7% of trips had real-time prediction data available, 1.8% of trips were missed, and the remaining 5.4% of trips ran, but did not have real-time data available

Over 60 percent of customers use apps to plan their trips, often timing their arrivals at stops based on real-time information. Real-time prediction data may be unavailable for a variety of reasons, including bus GPS devices that are not logged on or are malfunctioning, missed trips, or a trip that is very far off schedule.

Metro continues to conduct campaigns and coaching to ensure all operators log on to enable GPS devices. Metro also actively monitors buses that aren’t reporting data, working with vendors to fix broken units. In addition, Metro is taking steps to improve how data is displayed in busETA. By the end of calendar year 2023, Metro will adjust busETA so that the app only shows buses with real-time info, reducing customer confusion. Staff are also upgrading busETA so that terminal stations show departure times rather than the arrival time of the preceding trip.

Routes with lowest prediction availability in Q1

Route	% of trips with data
U4	71.5%
X3	75.0%
B27	76.7%
W47	79.2%
11C	80.8%
W6	82.0%
W8	82.2%
17G	82.5%
W2*	82.8%
A31	83.3%

*The W2 is a Frequent Service Network route

Chart takeaway | The U4 had the lowest percentage of trips that had real-time data available for predictions in Q1 followed by the X3, B27, W47, and 11C. Nine out of ten of the lowest performing routes are not part of the Frequent Service Network.



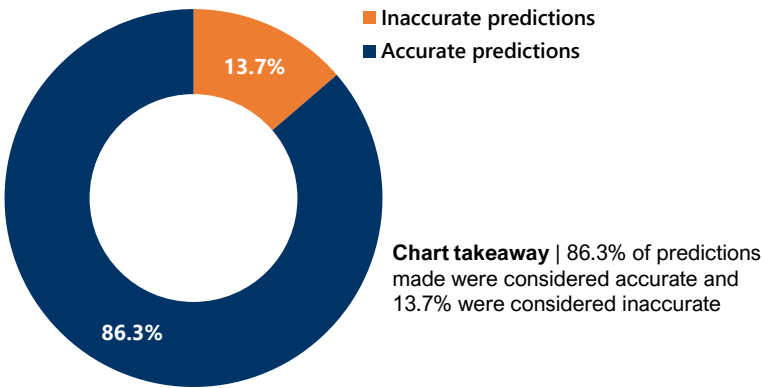
BUS PREDICTION ACCURACY

86.3% of real-time predictions that were accurate (no target in FY23)

Metro provides real-time arrival predictions for customers via the busETA tool along with signs at bus stops. Third-party apps like Google Maps, Apple Maps, and Transit also consume these predictions—although these apps may adjust predictions based on additional data sources.

Measure Details: What and Why
Customers rely on predictions in busETA or other third-party applications to plan their trips when taking Metrobus. Predicted arrival times must be close to actual arrival times to reduce excess customer wait time for customers. FY23 is the first year that Metro began archiving its prediction data. Due to the lack of historical data to identify trends, no target has been set for FY23.

Bus Prediction Accuracy in FY23 Q1



Metro uses the standard developed by the Massachusetts Bay Transit Authority (MBTA) to determine accuracy by comparing the predicted time of arrival to actual time of arrival. Because customers rely more on predictions in the near term, only predictions made within 30 minutes of arrival are evaluated, and standards for accuracy are more stringent as the bus approaches the stop. See the definitions section at the end of this report for more information on the methodology.

Prediction accuracy starts with the bus schedule. Large deviations from the schedule make it harder to predict arrivals. In addition, construction or roadway blockages—which slow buses down and lead to inconsistent travel times—also negatively impact prediction accuracy.

Routes with lowest prediction accuracy in Q1

Route	% of trips with accurate data
D34	58.8%
D31	59.3%
W47	60.5%
X3	68.2%
3Y	68.8%
D32	72.7%
W5	73.5%
W45	74.2%
S41	74.7%
D33	75.2%

Chart takeaway | The D34, D31 and W47 school routes had the lowest levels of prediction accuracy.



RAIL CUSTOMER ON-TIME PERFORMANCE

92% of rail customer trips completed on-time, meeting target of at least **92%**

Metro updated its rail schedules in June, August, and September to reflect increased train availability and major construction projects impacting service. The reliability of customer travel times remained near target throughout this period, with customers on average waiting less than scheduled headways for about 9 out of 10 trips.

Measure Details: What and Why
Metrorail On-Time Performance is a key measure of service reliability. Rail customer trips are “on-time” if they include waits shorter than the scheduled headways, train journeys that travel at expected speeds, and operational faregates, elevators, and escalators that do not delay travel to and from the platform. The FY23 target was set to improve over the five-year average performance of 89 percent.

Rail On-Time Performance against dotted line target

Y: % of on-time customer trips | X: month
Direction of desired performance: **up** ↑

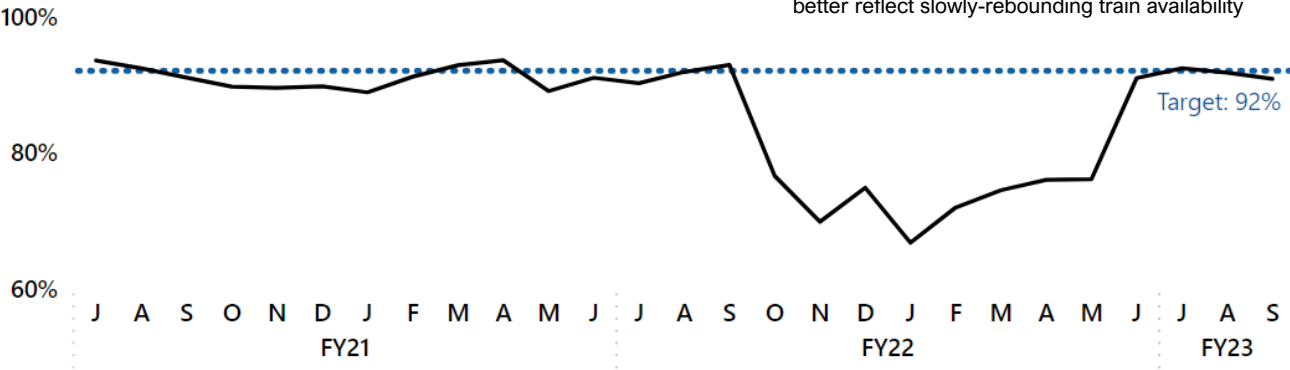


Chart takeaway | After falling during the sidelining of the 7000-series trains following the Blue Line derailment in October 2021, Rail Customer OTP is now reaching target thanks to schedule updates that better reflect slowly-rebounding train availability

Unplanned service disruptions lowered on-time performance by about 6.4 percentage points during Q1. Common causes of delay include Metro Transit Police responses to customer incidents, breakdowns of rail vehicles, switch or track circuit failures, or track issues. Midday, late night, and weekend single-tracking or shutdowns for planned maintenance lowered on-time performance by about 1.6 percentage points. Through Q1 of FY23, planned delays mainly occurred on Red, Green, and Yellow lines.

To improve performance, Metro is continuing to return more 7000-series cars to service. In September, Metro doubled the number of 7000-series trains in service each day, from about eight to 16, helping the system be more resilient. Metro also continues to monitor on-time terminal departures and schedule adherence. Trains running on-time mean that customers are also on-time.

Finally, Metro’s prioritization of critical repairs to rail infrastructure helps to ensure that the system remains in a state of good repair.



BUS ON-TIME PERFORMANCE

77% of bus service on-time, slightly missing target of 78%

Metrobus on-time performance started off strong in July and August, but the return of school traffic in September caused a sharp increase in late buses.

Measure Details: What and Why
Metrobus On-Time Performance is a key measure of service reliability. Buses are considered "on-time" if they are two minutes early or seven minutes late to the major stops on the route schedule. The FY23 target was set to improve over average performance in FY20 and FY22 (77 percent).

Metrobus OTP against dotted line target

Y: % of on-time buses | X: month
Direction of desired performance: up ↑

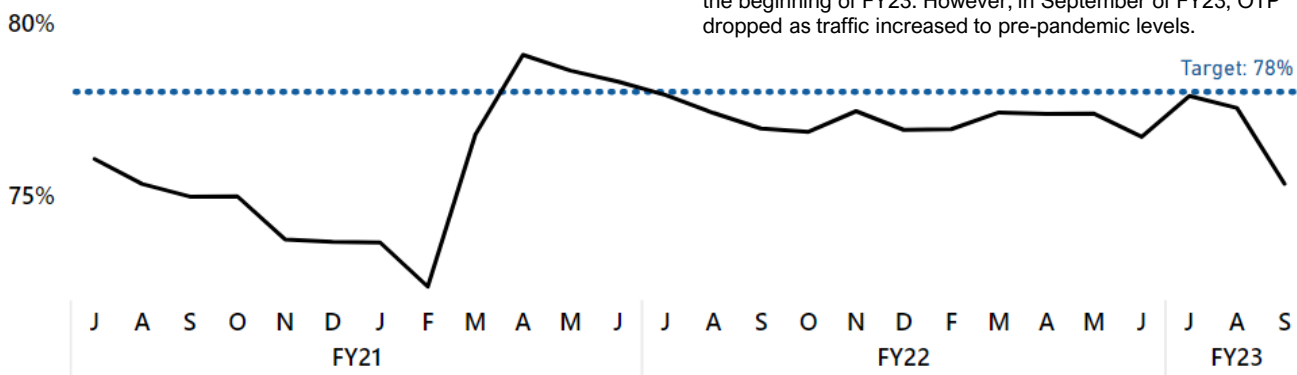


Chart takeaway | Bus OTP suffered in early FY21 as buses ran early due to less traffic. A schedule adjustment in March 2021 helped buses be more on time through FY22 and into the beginning of FY23. However, in September of FY23, OTP dropped as traffic increased to pre-pandemic levels.

Several factors influence bus OTP: bus availability and reliability; bus operator availability; bus operator coaching and training; the accuracy of the bus schedule; disruptions such as customer illness or criminal incidents; and other incidents such as construction, special events and weather.

The accuracy of the bus schedule has one main external factor: adjusting to changes in traffic patterns, which has been particularly challenging in the last several years. In September, traffic increased compared to July and August, which meant buses ran late throughout the day. Metro will implement a new schedule in December to address some of the new traffic patterns.

To address bus operator availability, Metrobus holds weekly recruiting events. As of November 2022, there are 133 new operators in training

with the goal of recruiting 475 more by the end of the fiscal year.

To address operator coaching, Metrobus has field supervisors stationed at key points along routes to monitor operator performance. In Q1, supervisors focused on routes that were commonly departing early and worked with operators to ensure they were leaving on time. Additionally, supervisors focused on ensuring operators were leaving the bus depot on time and logged onto the bus so that the bus could accurately report real-time information, improving the customer experience.

ACCESS ON-TIME PICK-UP PERFORMANCE

92.9% of Access customers picked up on-time, meeting target of no less than **92%**

Reduced ridership (58 percent of pre-pandemic demand), coupled with ample vehicle resources and leveraging Abilities-Ride partners, have led to strong on-time pick-up performance even as more shared rides are scheduled.

Measure Details: What and Why
“On-time” means the vehicle arrives at the pick-up location within the scheduled 30-minute pick-up window. MetroAccess on-time pick-up performance is essential to delivering quality service to the customer. The FY23 target was set to maintain the average performance over the last five years: 92 percent.

Access OTP against dotted line target

Y: % of on-time stops | X: month
Direction of desired performance: **up** ↑

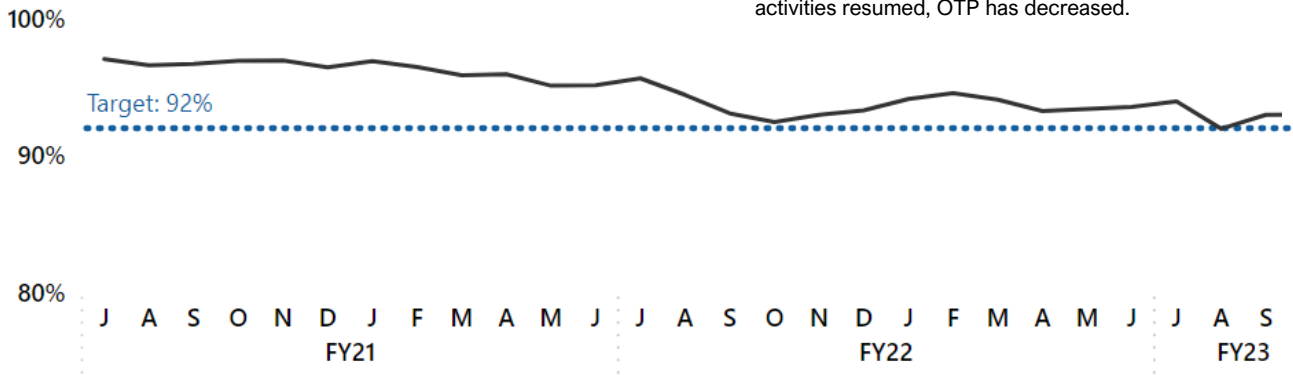


Chart takeaway | OTP surged during the pandemic when shared rides were suspended and traffic eased. As normal activities resumed, OTP has decreased.

On-time performance starts with good schedules. To continue strong performance, MetroAccess regularly works on building better schedules through improvements to the accuracy of length-of-trip estimates by basing them on the fixed-route equivalent.

MetroAccess also partners with their Operations Control Center contractor to proactively identify vehicles with increasing dwell times. This helps prevent cascading delays and supports vehicle arrival at the start of a customer's pick-up window.

Finally, MetroAccess continues to dynamically adjust the system's scheduling parameters and leverage available taxi and alternative resources when trips are projected late throughout the day.



ELEVATOR AVAILABILITY

97.7% of elevators were available on average, meeting target of at least **97.5%**

In Q1 of FY23, about six of Metro's 279 elevators were out of service at any given time. Over half of hours out of service were the result of planned capital work to rehabilitate or replace older assets in the system. The remaining outage hours were attributed to other work such as unit failures, related fixes, or preventive maintenance.

Measure Details: What and Why
Elevator availability shows how often customers could use elevators in our rail system. Elevators are essential in providing equal access to Metrorail. The FY23 target factors in the average number of units expected to be out of service for capital rehabs and replacements and aims to reduce the number of units out of service for other reasons by 5 percent compared to performance over the past three years.

Elevator Availability against dotted line target

Y: % availability | X: month
Direction of desired performance: **up** ↑

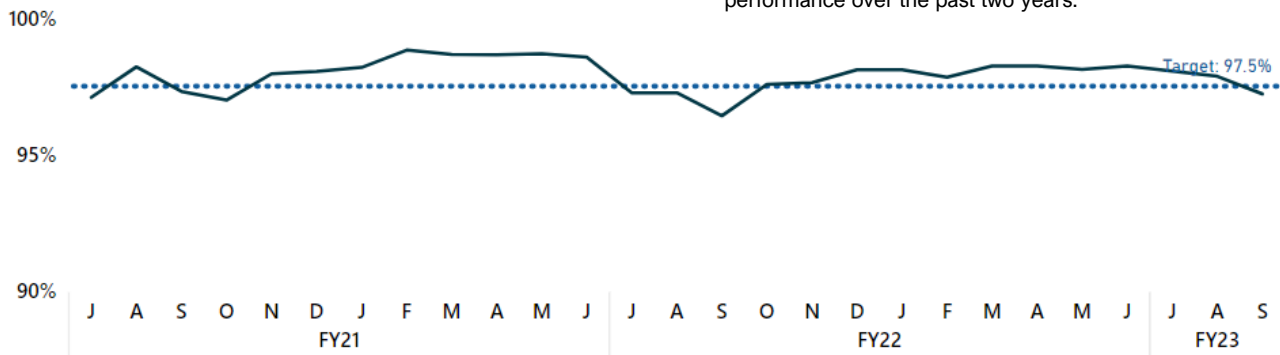


Chart takeaway | Metro's investments in rehabilitating and replacing units, conducting preventive maintenance, and quickly responding to outages have enabled strong performance over the past two years.

For the past two decades, Metro has heavily invested in rehabilitating and replacing units to keep them in a state of good repair. Metro continues to make progress on a 2014 contract to replace 102 elevators—nearly 40% of all units—slated for completion in early 2024. By the end of FY23 Q1, 91 elevators were complete.

Elevator Availability Breakdown | FY23 Q1

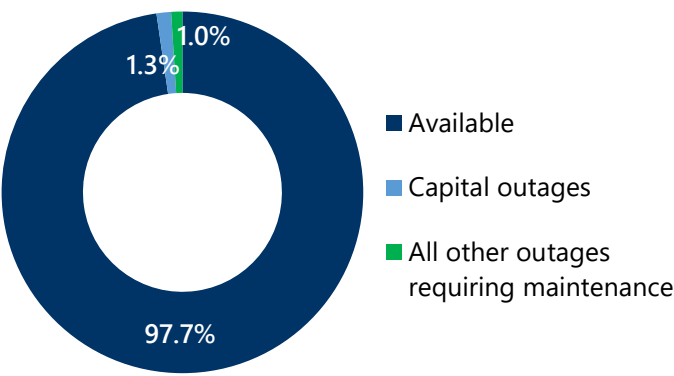


Chart takeaway | Over half of the hours that elevators were unavailable were due to capital work such as planned rehabilitations and replacements of older assets.




ESCALATOR AVAILABILITY

92.7% of escalators were available on average, missing target of at least **92.9%**

In Q1 of FY23, about 45 of Metro’s 615 escalators were out of service at any given time. During this quarter, more units than originally anticipated were out of service for capital rehabs and replacements, leading to lower availability. The amount and duration of unplanned outages was better than expected.

Measure Details: What and Why
Escalator availability shows how often customers can use escalators in our rail system. Units are unavailable when they require corrective maintenance or major rehab/replacement. This measure does not count when units are temporarily out-of-service and only need to be reset. The FY23 target factors in the average number of units undergoing rehab/replacement and aims to reduce the number of units out of service for other reasons by 10 percent compared to performance over the past three years.

Escalator Availability against dotted line target

Y: % availability | X: month
Direction of desired performance: **up** 

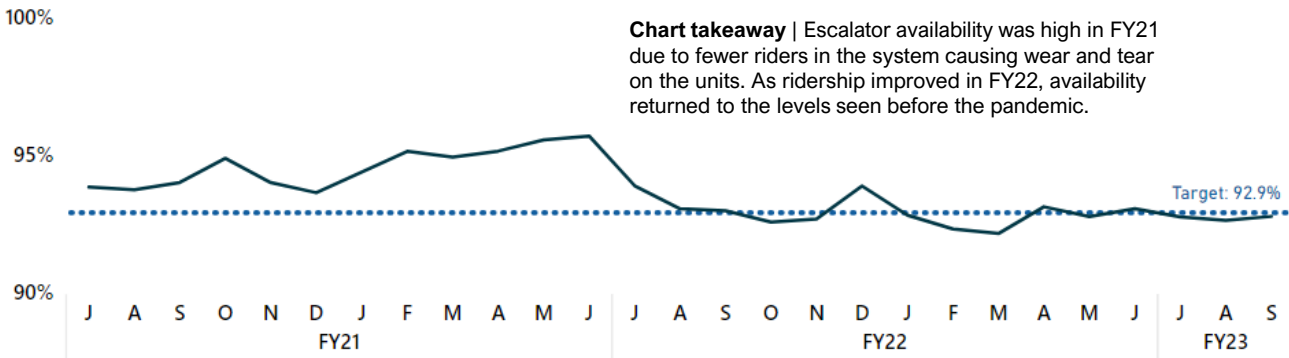


Chart takeaway | Escalator availability was high in FY21 due to fewer riders in the system causing wear and tear on the units. As ridership improved in FY22, availability returned to the levels seen before the pandemic.

Capital work was the main reason for below-target escalator availability, with 24 units on average out of service this quarter for capital work (3.8 percent of the system). This work is necessary to keep the units in a state of good repair and helps reduce unplanned breakdowns.

In FY23, Metro will continue its multi-year contract to replace 130 escalators across the system, with 33 completed since April 2021 and another 23 to be completed by the end of FY23. Work on the contract to rehabilitate 89 escalators will also continue, with 37 completed since September 2020 and another 15 to be completed by the end of FY23.

Escalator Availability Breakdown | FY23 Q1

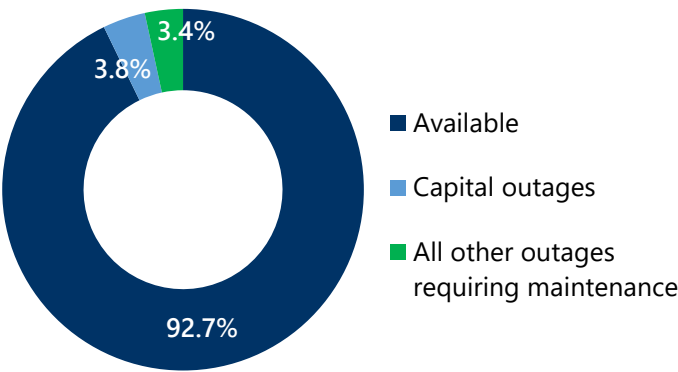


Chart takeaway | Over half of the hours that escalators were unavailable were due to capital work such as planned rehabilitations and replacements of older assets.



RAIL CROWDING

0.7% of passenger time in crowded conditions (no target in FY23)

Metrorail crowding has steadily increased since the beginning of FY22, which is reflective of the increase in ridership during that time. As Metro gradually re-introduces 7000-series trains into service, staff will add trips to increase capacity and alleviate the crowding that occurs during peak times.

Measure Details: What and Why
Rail crowding evaluates how often customers may be uncomfortable on crowded trains. Crowded conditions are defined as > 100 passengers per car, which is when all seats are occupied and about 35 customers are standing.

Rail Crowding

Y: % passenger time in crowded conditions | X: month
Direction of desired performance: **down** ↓

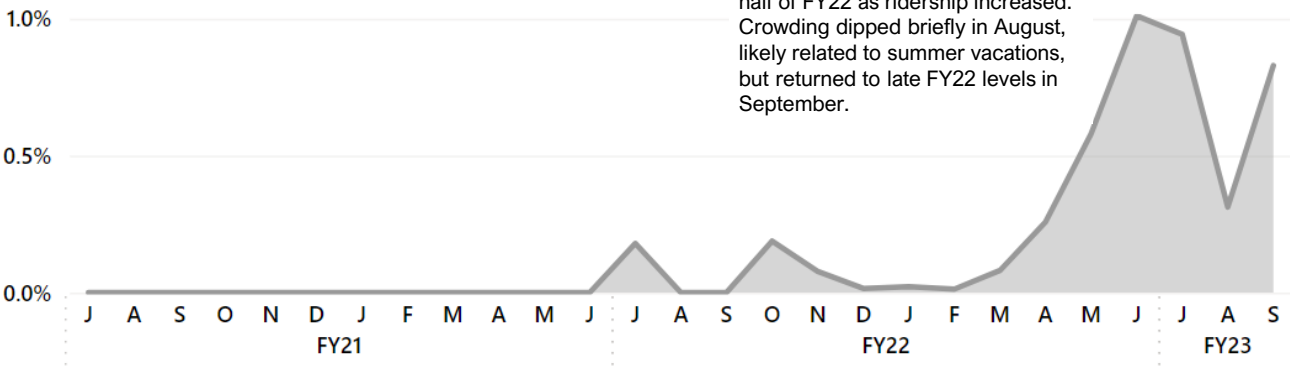


Chart takeaway | Crowding rose dramatically throughout the second half of FY22 as ridership increased. Crowding dipped briefly in August, likely related to summer vacations, but returned to late FY22 levels in September.

At the beginning of FY23, Metro returned to the pre-pandemic definition of crowding outlined in the WMATA Service Standards: an average of 100 people per railcar. The chart above uses this standard for all months to better show the trend in crowding over time.

Reduced frequencies implemented in response to the October 2021 derailment and removal of the 7000-series trains combined with increases in rail ridership have led to more crowding, especially on the Orange, Green, and Red lines during peak commuting hours.

Metrorail has added train trips during the busiest times, addressing the most acute periods of crowding. Frequencies will increase as the 7000-series rail cars are returned to service over the next quarter.

Rail crowding by line | FY23 Q1

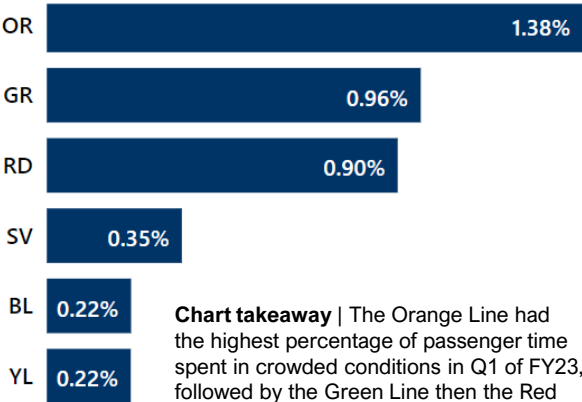


Chart takeaway | The Orange Line had the highest percentage of passenger time spent in crowded conditions in Q1 of FY23, followed by the Green Line then the Red Line. Crowding is worst during the AM Peak period. The most crowded segments in the system are on the Red Line between Metro Center and Union Station, the Green Line between L'Enfant Plaza and Navy Yard Ball Park, and the Orange Line between Clarendon and Rosslyn.



BUS CROWDING

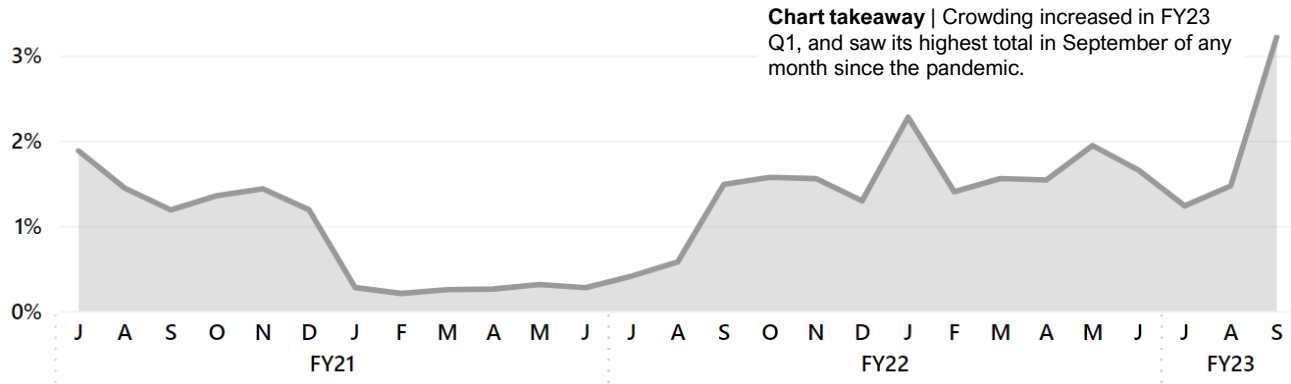
2.0% of passenger time in crowded conditions (no target in FY23)

Metrobus crowding achieved the highest level in Q1 of FY23 since the start of the pandemic. Crowding on buses is especially high after Labor Day in large part due to the start of the school year. Many students in the DC area use Metrobus to get to school, and many caregivers return to in-person work.

Measure Details: What and Why
Bus crowding evaluates how often bus customers may be uncomfortable on crowded vehicles. Crowding is defined as >40 passengers per bus for a 40-foot bus, which is when all seats are occupied on the vehicle.

Bus Crowding

Y: % passenger time in crowded conditions | X: month
Direction of desired performance: **down** ↓



At the beginning of FY23, Metro returned to the pre-pandemic definition of crowding outlined in the WMATA Bus Service Guidelines: 100% of the seated capacity of a bus (40 passengers in a 40-foot bus). The chart above uses this standard for all months to better show the trend in crowding over time.

Crowding is concentrated on specific routes, with about 30 routes accounting for most of the crowding in the system and the remaining routes seeing very little. When customers do experience crowding, it is often for only a few stops on their journey. The figure to the right shows the top 10 most crowded routes in Q1 of FY23. The top five routes are all school routes.

Bus crowding by line | Most crowded routes, FY23 Q1

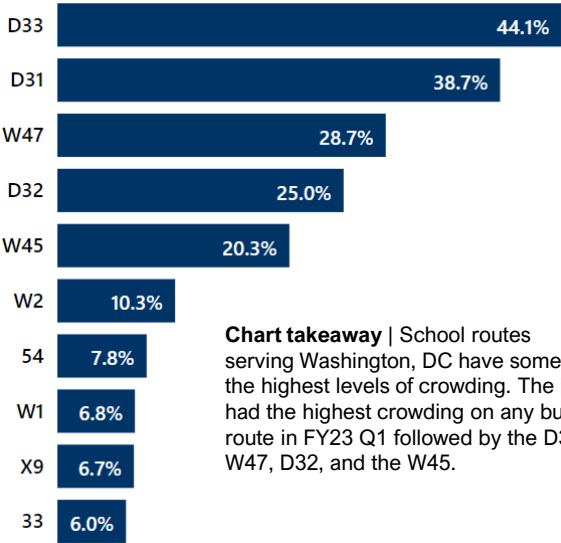


Chart takeaway | School routes serving Washington, DC have some of the highest levels of crowding. The D33 had the highest crowding on any bus route in FY23 Q1 followed by the D31, W47, D32, and the W45.



RAIL FLEET RELIABILITY

7k fleet: **28,700** miles between failure, missing target of at least **56,500**

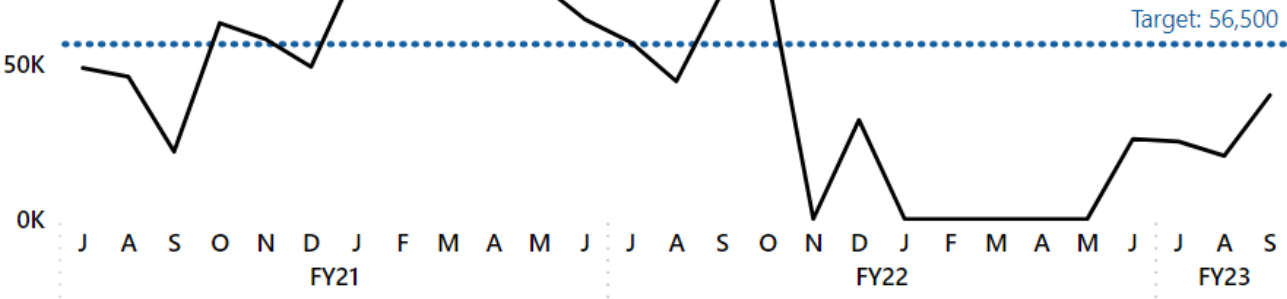
Metro began returning 7000-series railcars to service in June, with the fleet accounting for 15 percent of total rail mileage in Q1 of FY23. The lower-than-usual mileage brings down the fleet's reliability rate, which should improve as more trains return to service. By the end of September, Metro was consistently running 12-13 of these trains, up from six or seven in July.

Measure Details: What and Why
Rail fleet reliability is a measure of the quality of service Metro provides customers. It communicates the effectiveness of Metro's railcar maintenance and engineering programs. This measure is also part of required reporting to the National Transit Database (NTD). The FY23 target was set to improve 5 percent over average performance in FY20-FY22 (53,700 miles for the 7000-series and 13,500 for the legacy fleet).

Rail Fleet Reliability against dotted line target

Y: fleet miles between failure | X: month
Direction of desired performance: **up** ↑

Chart takeaway | The 7000-series railcars have traditionally been the most reliable part of Metro's fleet, consistently traveling more than 50,000 miles between failure prior to the derailment of a 7000-series train in October 2021. After briefly returning in December, railcars have steadily run since June and reliability has improved. This trend is expected to continue as more of the fleet returns to service.



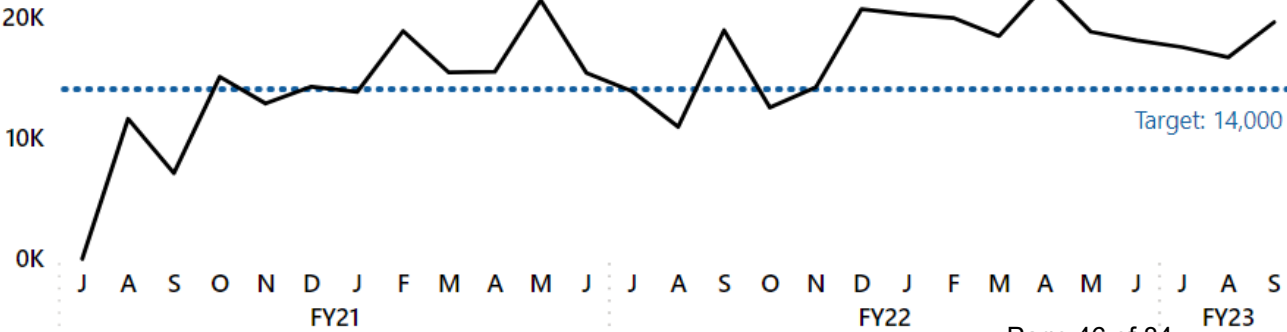
Legacy fleet: **17,800** miles between failure, meeting target of **14,000**

The legacy fleet is comprised of over 500 2000-, 3000-, and 6000-series cars that range from 17 to 40 years old. These cars provided 85 percent of service in Q1 of FY23 and continued to deliver their best performance in decades thanks to stronger inspection and maintenance practices, and engineering programs to address failure-prone components.

Rail Fleet Reliability against dotted line target

Y: Mean Distance Between Failure | X: Month
Direction of desired performance: **up** ↑

Chart takeaway | Legacy fleet reliability remained strong and exceeded the target in Q1 of FY23.



BUS FLEET RELIABILITY

7,100 miles between failure, missing target of at least **8,000**

The dip in FY23 performance is largely due to global supply chain issues delaying parts and the delivery of new buses. Results vary by fuel type. The clean diesel fleet, which includes the newest buses, performed at 11,200 miles between failure, followed by the CNG fleet at 8,000 miles between failure and then the hybrid fleet, which are the oldest buses, at 5,500 miles between failure.

Measure Details: What and Why
Bus fleet reliability is a measure of the quality of service Metro provides customers. It communicates the effectiveness of Metro's bus maintenance and engineering programs. This measure is also part of required reporting to the National Transit Database (NTD). The FY23 target was set to improve 5 percent over average performance over the past five years (7,500 miles).

Bus Fleet Reliability against dotted line target

Y: fleet miles between failure | X: month
Direction of desired performance: **up** ↑

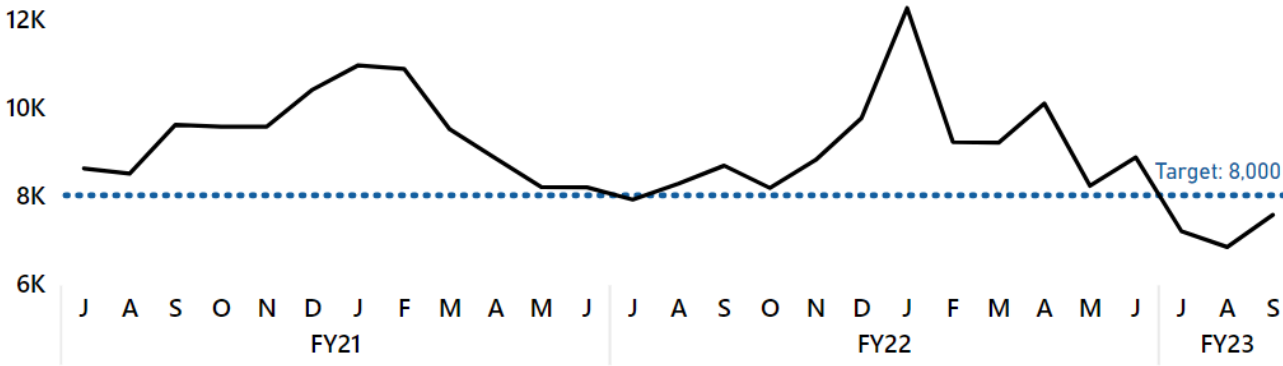


Chart takeaway | Bus fleet reliability is seasonal, improving in winter and falling in summer. In FY23 Bus reliability fell below 8,000 for the first time in two years.

Through the end of FY22, the Bus Maintenance team had been able to mitigate the effects of the global supply chain shortages because Metro plans two years ahead for parts needed for scheduled maintenance. However, in FY23 the effects of parts shortages began to finally show, as vendors have not been able to supply the pre-planned parts needed for regular maintenance. Additionally, delivery of the 100 new buses replacing the oldest buses in the fleet is delayed. These oldest buses are among the least reliable.

So far in FY23, the Bus Maintenance team has procured updated diagnostic software to make non-preventive maintenance more efficient. Additionally, Metro has adapted staffing strategies so that mechanics waiting on parts to overhaul buses at their midlife have shifted to non-preventive maintenance groups that may be short-staffed.



ACCESS FLEET RELIABILITY

22,700 miles between failure, meeting target of at least **22,000**

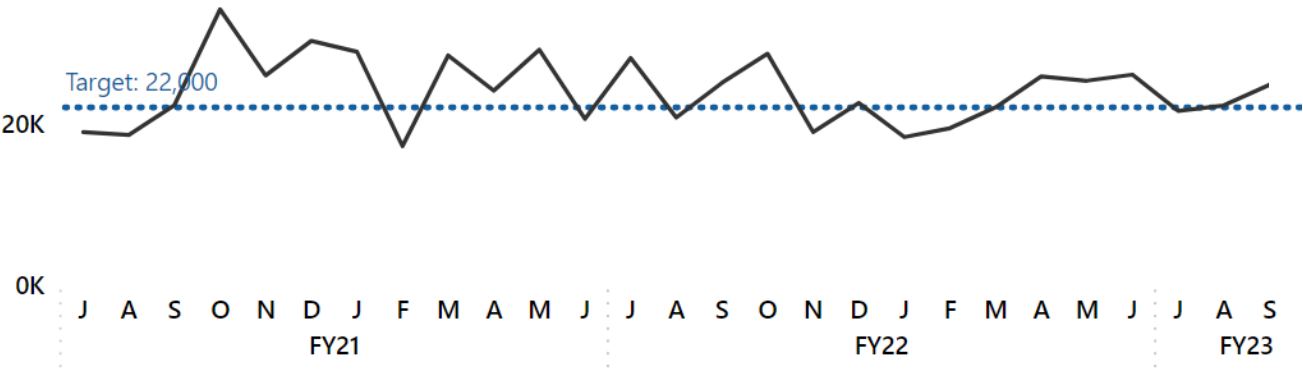
MetroAccess has sustained high levels of reliability by consistently replacing vans at the end of their useful life. Staff plan to continue to replace vans with sedans, which have shown fewer maintenance-related issues. Additionally, MetroAccess will begin adding ramp-equipped vans to the fleet this fiscal year.

Measure Details: What and Why
Minimizing vehicle breakdowns and maintaining a state of good repair for the fleet enables on-time pick-ups for customers and reduces the likelihood of safety incidents. This measure is also part of required reporting to the National Transit Database (NTD). The FY23 target was set to continue performance levels achieved in FY22.

Access Fleet Reliability against dotted line target

Y: fleet miles between failure | X: month
Direction of desired performance: **up** ↑

Chart takeaway | MDBF generally exceeded target during the pandemic, and continues to perform above target this FYTD



To sustain fleet reliability performance, Access is continuing its procurement of 50 sedans and up to 300 ramp-equipped minivans in FY23 and FY24 to replace 350 aging vans. Access also conducts quarterly third-party audits to assess the overall condition of the vehicles, which are maintained by the department's contractors.



5.8 Part 1 Crimes per million passengers, meeting target of no more than 6.5

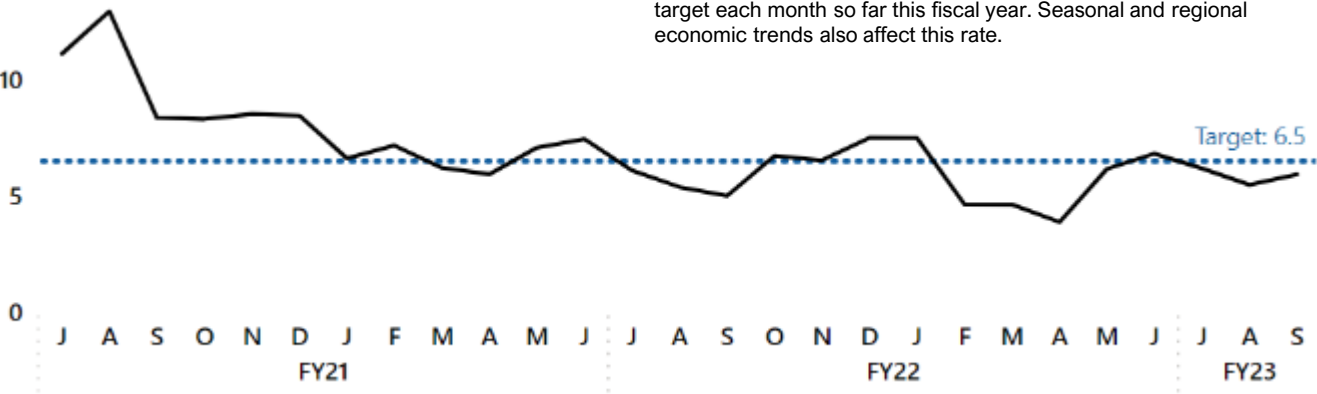
There are two main types of Part 1 crimes: crimes against persons and crimes against property. The rate of crimes against persons continued to fall, with about 0.9 crimes per million passengers. The rate of crimes against property is up slightly compared to the same time last year, with 4.9 crimes per million passengers.

Measure Details: What and Why
This measure evaluates how secure customers and employees are while riding the Metro system. This measure includes incidents that meet a set of criteria determined by the FBI. The FY23 target was set to improve 5 percent over average performance for FY21-FY22 (6.8 Part 1 crimes per million passengers).

Part 1 Crime Rate against dotted line target

Y: Part 1 crime rate | X: month
Direction of desired performance: **down** ↓

Chart takeaway | The crime rate has decreased over the past two years as ridership has increased. The crime rate has been below target each month so far this fiscal year. Seasonal and regional economic trends also affect this rate.



There were a total of 267 Part 1 crimes in Q1 FY23: 37 crimes on the bus or at the bus stop, 185 in the rail system, and 43 in Metro parking lots. By far the most common type of crime is theft/robbery (192 crimes), followed by assault (41 crimes).

The Metro Transit Police Department works hard to keep the Metro system safe for customers and employees. In Q1, MTPD implemented Operation “HelpingHands”, a high-visibility program that puts more officers in the Metro system to prevent crime and to interact with our customers. Officers collaborated with the public relations team to highlight Metro’s phone number and TextTip line to ensure customers know how to report crimes or suspicious activity.

Staff also continued developing partnerships with community resources to help those who are

experiencing homelessness or in mental health crises. Engaging with the region’s youth continues to be a high priority; MTPD continues its several new youth-focused initiatives launched this calendar year.



RAIL SYSTEM SAFETY EVENTS

5.7 Rail safety events per 10 million revenue miles, exceeding target of no more than 3.9

There were eight major safety events this quarter. Metro is implementing Safety Management System (SMS), a comprehensive, collaborative approach that brings management and labor together to continuously improve how safety risks are identified and assessed with mitigating actions taken before an accident or incident occurs.

Measure Details: What and Why
Safety is a core Metro value. This measure is part of Metro’s Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes incidents that meet the criteria of a National Transit Database (NTD) major safety event. The FY23 target was set to improve 5 percent over average performance over the past five years.

Rail Safety Event Rate against dotted line target

Y: # events per 10m revenue miles | X: month
Direction of desired performance: **down** ↓

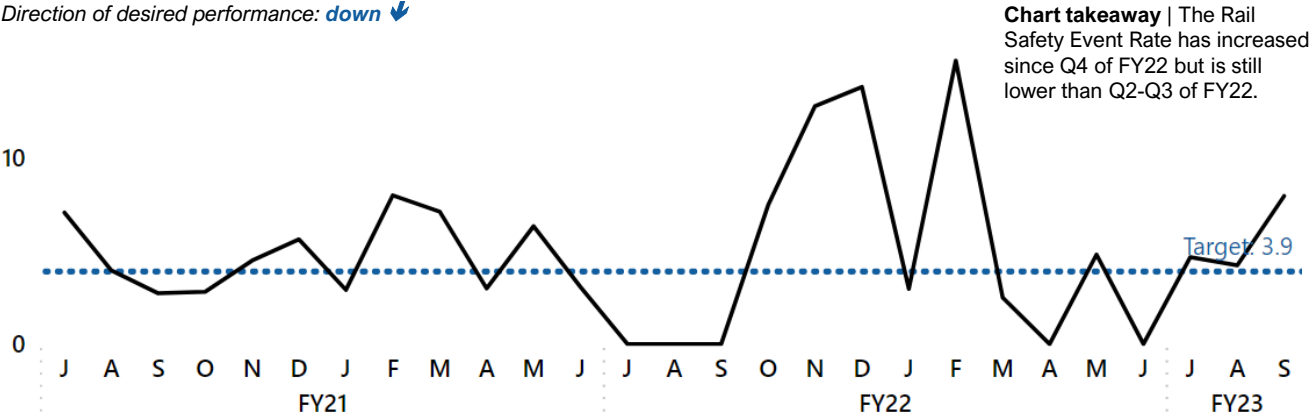


Chart takeaway | The Rail Safety Event Rate has increased since Q4 of FY22 but is still lower than Q2-Q3 of FY22.

Eight rail safety events in Q1 met the “Major” threshold for reporting to FTA’s National Transit Database. Three of these events were fires: an electrical fire involving arcing and burning cables, a report of fire in a railcar, and smoke in a station resulting from a cut wire during a faregate installation. There were three maintenance vehicle derailments, none of which resulted in injuries. The two other incidents involved a gas leak inside a mechanical room at a rail yard and a collision event involving a customer trespassing who was struck by a train.

and revisions to asset inspection, testing, and maintenance plans.

As part of its SMS implementation, Metro conducts in-depth investigations to answer why and how safety events occur to identify opportunities for prevention and process improvement. For example, the investigation of the arcing and burning cables identified the need to develop an Incident Management Framework



BUS SAFETY EVENTS

54.7 Bus safety events per 10 million revenue miles, missing target of no more than **53.0**

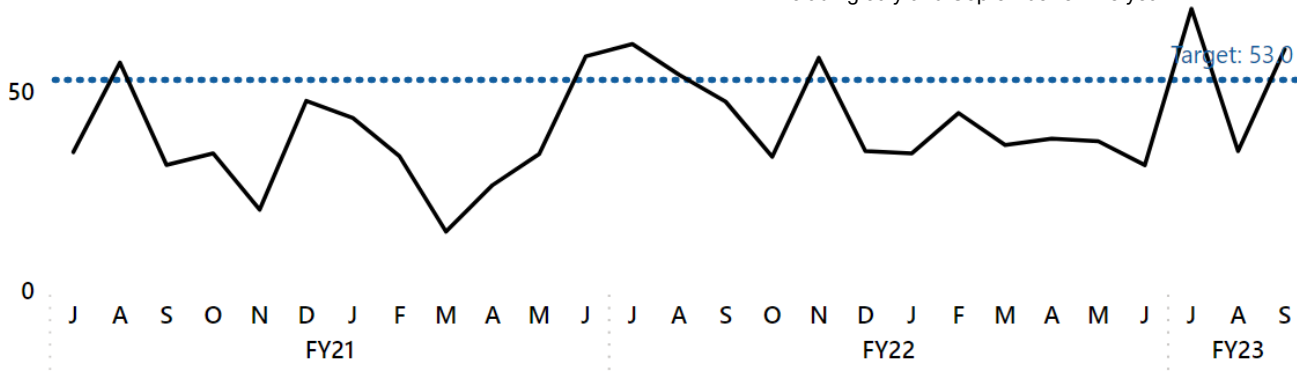
There were 52 major bus-related safety events among the 9.5 million revenue miles traveled during Q1 of FY23. This is about the same as Q1 of FY22. There were 49 collisions, two fires, and one incident that was not a collision but resulted in multiple customer injuries.

Measure Details: What and Why
Safety is a core Metro value. This measure is part of Metro's Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes incidents that meet the criteria of a National Transit Database (NTD) major safety event. The FY23 target was set to improve 15 percent over average performance over the past five years.

Bus Safety Event Rate against dotted line target

Y: # events per 10m revenue miles | X: month
Direction of desired performance: **down** ↓

Chart takeaway | The Bus Safety Event Rate has remained below target for the past two years except for a few months where incidents spiked, including July and September of this year.



Major safety events on bus result in injuries that require at least one person to be transported from the scene for medical attention or result in major damage to the bus or another vehicle.

There were 49 bus collisions in Q1 of FY23 that met these criteria. Metro's investigations determined that about two-thirds of these were non-preventable. Major safety events on bus result in injuries that require at least one person to be transported from the scene for medical attention or result in major damage to the bus or another vehicle.

Reducing collisions is a high priority for Metrobus. Bus uses regular data analysis to identify intersections and other locations where collisions commonly occur and provides on-the-street coaching to operators along those routes. Metro also regularly identifies areas of the

roadway with imminent hazards (such as new construction zones) and implements detours to reroute buses.

In Q1 of FY23, Metro conducted a targeted written and video campaign emphasizing identifying and managing fatigue and provided weekly reminders to focus on a particular safety practice, such as the proper observations to make at intersections before moving through.



ACCESS SAFETY EVENTS

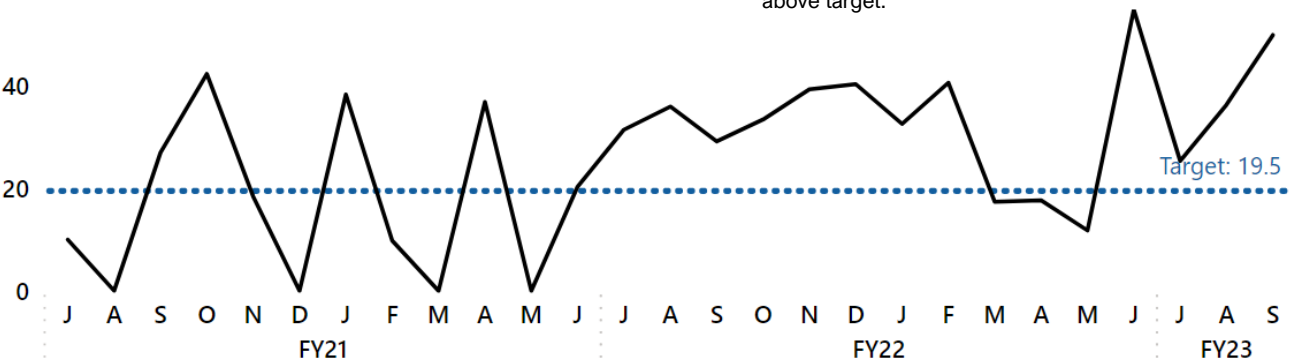
37.2 Access safety events per 10 million revenue miles, missing target of no more than **19.5**

There were 18 major safety events for MetroAccess through Q1 of FY23, compared to 16 through Q1 of FY22. Seventeen of the events were collisions and one was a smoking vehicle that needed to be towed.

Measure Details: What and Why
Safety is a core Metro value. This measure is part of Metro’s Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes incidents that meet the criteria of a National Transit Database (NTD) major safety event. The FY23 target was set to improve upon performance levels achieved in FY22.

Access Safety Event Rate against dotted line target

Y: # events per 10m revenue miles | X: month
Direction of desired performance: **down** ↓



MetroAccess launched its Incident Free in ‘23 safety campaign and conducted its first annual Safety Summit with contractor leadership, Safety Managers, and Operators. During the summit, Metro managers and contractor leadership developed a vision for safety in MetroAccess service and reviewed how to leverage tools like the Access Safety Dashboard to identify training opportunities, monitor incident trends, and better allocate road supervisor resources to respond to incidents in a timelier manner.

MetroAccess continues to implement a revised Local Safety Committee process with contractors that is more fully aligned with Metro policy to more proactively identify and address risks and increase safety communications to frontline employees.



Rail System Customer Injuries

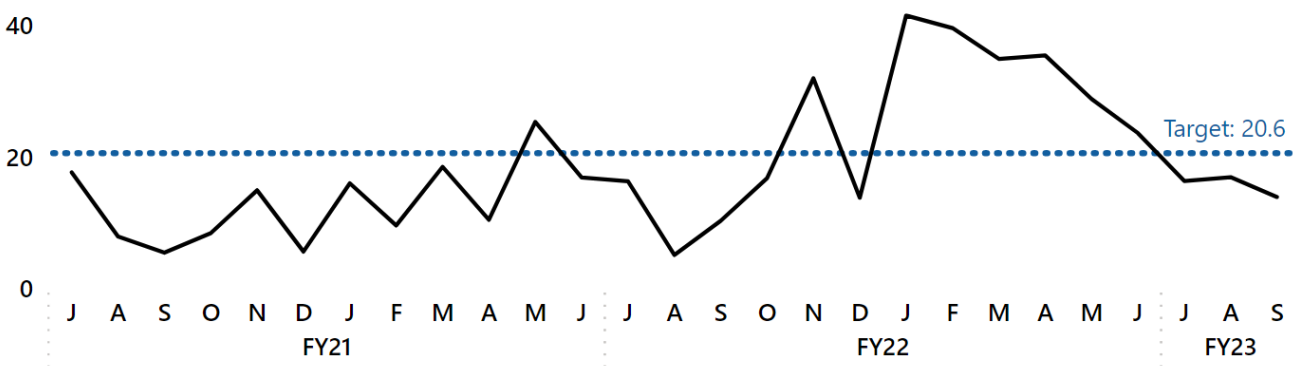
15.7 Rail customer injuries per 10 million revenue miles, meeting target of no more than **20.6**

There were 22 customer injuries in the rail system through Q1 of FY23, only one more compared to Q1 of FY22. All injuries in Q1 were slips/trips/falls. Over 60 percent of these occurred on an escalator. Bethesda rail station had the most injuries this quarter, with four customer injuries.

Measure Details: What and Why
Safety is a core Metro value. This measure is part of Metro's Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes injuries in which customers require immediate medical attention away from the scene. The FY23 target was set to improve 15 percent over average performance over the past five years.

Customer Injury Rate against **dotted line target**
Y: # injuries per 10m vehicle revenue miles | X: month
Direction of desired performance: **down** ↓

Chart takeaway | Rail Customer Injury Rate is trending downwards since reaching a high in January of FY22.



Station modernization improvements play a role in preventing rail customer injuries. Renovations as part of the Platform Improvement Project—a four-year, 20-station project completed in September 2022—include new slip-resistant tiles throughout the stations, renovated platform edges, brighter energy-efficient LED lighting, and illuminated handrails.

Continued improvements in train frequency as more of the 7000-series fleet returns may also help by reducing customer need to rush, another driver of slip/trip/falls on escalators or platforms.

Slip/trip/falls on escalators also drive customer injuries. Metro completed a benchmarking study in the summer of 2022 to research best practices that other transit agencies have implemented to address slip/trip/falls on escalators. The Elevator/Escalator team, working with Metro's Safety Department, will pilot a new signage campaign at select stations across the system in winter 2023 to help mitigate these incidents.



BUS CUSTOMER INJURIES

69.4 Bus customer injuries per 10 million revenue miles, missing target of no more than **56.4**

There were 66 bus customer injuries through Q1 of FY23: 35 slip/trip/falls, 24 related to collisions, and seven other types of injuries. Many of the slip/trip/fall injuries occur when the bus is in motion and/or brakes suddenly to avoid a collision.

Measure Details: What and Why
Safety is a core Metro value. This measure is part of Metro's Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes injuries in which customers require immediate medical attention away from the scene. The FY23 target was set to improve 15 percent over average performance over the past five years.

Bus Customer Injury Rate against dotted line target

Y: # injuries per 10m vehicle revenue miles | X: month
Direction of desired performance: **down** ↓

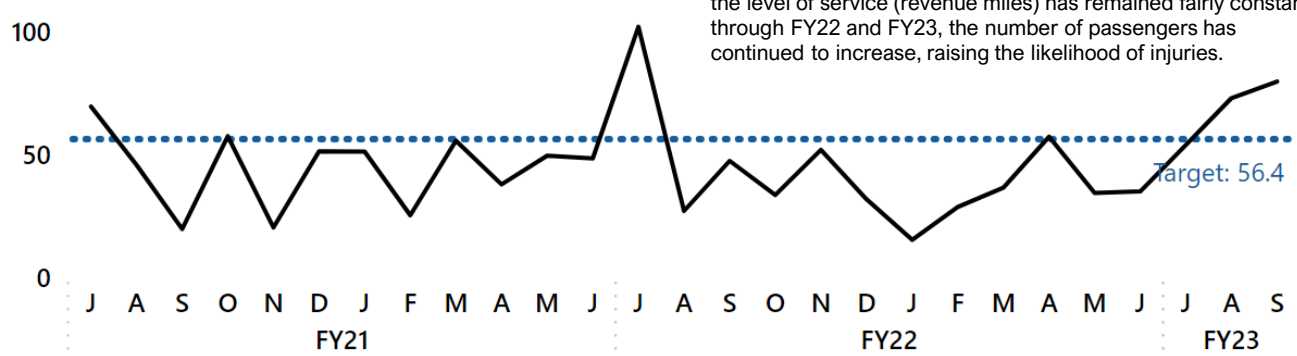


Chart takeaway | Bus Customer Injury Rate is trending upwards in Q1 of FY23 compared to lower rates in FY21 and FY22. While the level of service (revenue miles) has remained fairly constant through FY22 and FY23, the number of passengers has continued to increase, raising the likelihood of injuries.

To improve bus customer safety, Metro actively coaches operators on techniques to avoid hard braking, which is a primary cause of customers falling while on the bus. Metrobus also provides written messaging to operators reminding them to observe boarding customers and wait to move until they are seated or holding on, which prevents customers from falling due to the acceleration of the bus moving.

Finally, supervisors also remind operators to activate the Automated Voice Annunciator that provides stop announcements, which helps customers know when their stop is coming so they are not rushing to get off the bus and getting hurt in the process.



ACCESS CUSTOMER INJURIES

16.6 Access customer injuries per 10 million revenue miles, missing target of no more than **15.6**

Eight MetroAccess customers were injured in Q1 of FY23, compared to six in Q1 of FY22. Four injuries were related to non-preventable collisions, three involved preventable collisions, and one occurred when a passenger fell out of his wheelchair prior to boarding the vehicle.

Measure Details: What and Why
Safety is a core Metro value. This measure is part of Metro's Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes injuries in which customers require immediate medical attention away from the scene. The FY23 target was set to improve 15 percent over average performance over the past five years.

Access Customer Injury Rate against dotted line target

Y: # injuries per 10m vehicle revenue miles | X: month
Direction of desired performance: **down** ↓

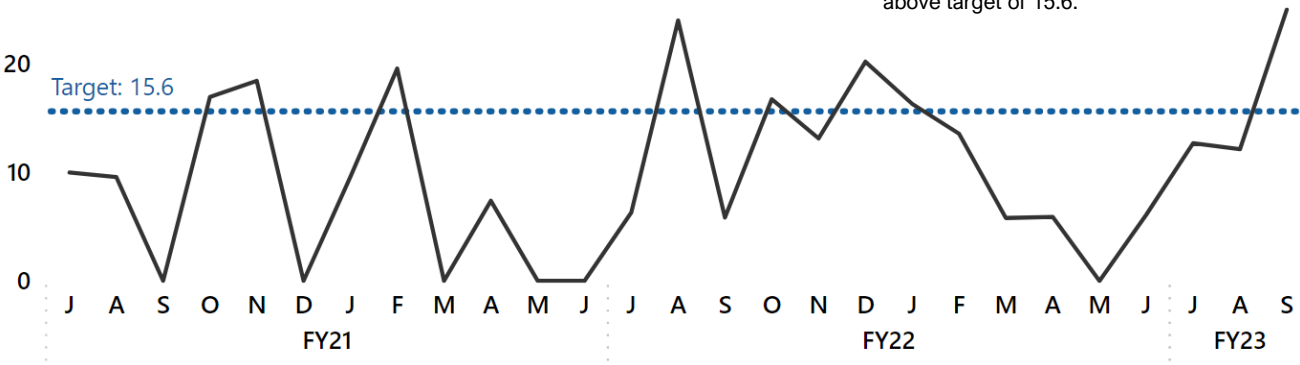


Chart takeaway | Four injuries in September 2022 pushed the FYTD customer injury rate above target of 15.6.

To address collision-related incidents, MetroAccess continues to update DriveCam units, and eventually will add in-vehicle behavioral recognition and alerting capability. This technology, new to MetroAccess, alerts vehicle operators about unsafe or potentially unsafe behaviors at the time of detection and creates an event clip for coaching.

For assistance-related injuries, MetroAccess is developing a door-to-door service training video with an Occupational Therapist. The service also began standardized tracking of operator wheelchair securement certification to ensure training is up-to-date. A tactical safety messaging campaign aimed at passenger assistance and related injuries that began in FY22 Q3 has resulted in only one assistance-related injury between FY22 Q4 and FY23 Q1.



RAIL EMPLOYEE/CUSTOMER ASSAULTS

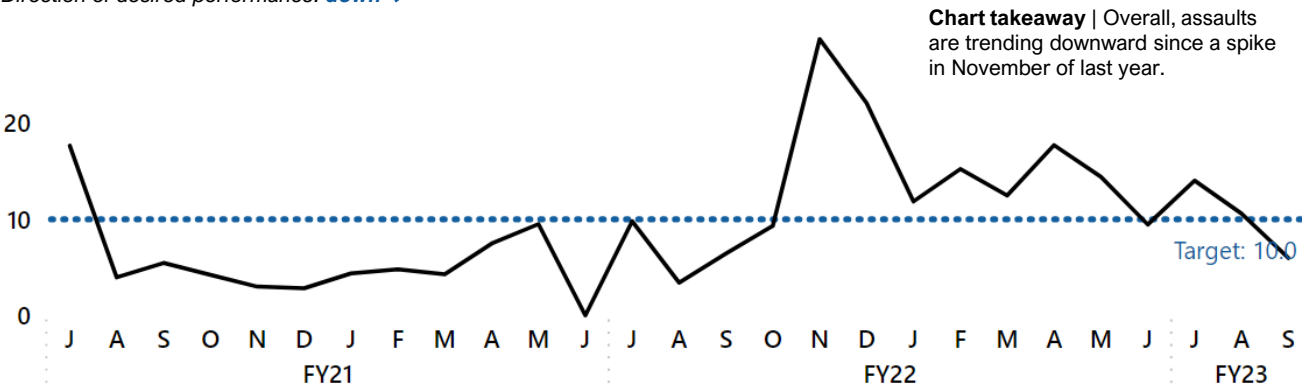
10 Rail customer and employee assaults per 10 million vehicle revenue miles, meeting target of no more than **10**

There were four rail employee assaults and ten rail customer assaults in Q1 of FY23, compared to six employee and seven customer assaults in Q1 of FY22. This equaled a rate of 10 assaults per 10 million vehicle revenue miles.

Measure Details: What and Why
This is a measure of customer and employee security while on the Metro system. This measure is part of Metro's Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes incidents in which customers and employees are unlawfully physically assaulted and require immediate medical attention away from the scene. The FY23 target was set to improve over FY22.

Rail NTD-Reportable Assault Rate against dotted line target

Y: # assaults per 10m vehicle revenue miles | X: month
Direction of desired performance: **down** ↓



To prevent customer assaults, Metro Transit Police are increasing presence on bus routes and train stations where they commonly occur. Additionally, Metro is focusing on ensuring all Metro station platform lighting is consistently maintained.

Rail Station Managers engage regularly with members of the public and are also at a higher risk for assault. Metro advises Station Managers to avoid engaging in potentially unsafe situations and provides de-escalation training and dispute resolution strategies.



BUS EMPLOYEE/CUSTOMER ASSAULTS

9.5 Bus customer and employee assaults per 10 million vehicle revenue miles, meeting target of no more than **10**

There were six bus customer assaults and three bus employee assaults in Q1 of FY23, compared to eight customer and one employee assault in Q1 of FY22.

Measure Details: What and Why
This is a measure of customer and employee security while on the Metro system. This measure is part of Metro's Agency Safety Plan and aligns with the measures in the National Public Transportation Safety Plan published by the Federal Transit Administration. It includes incidents in which customers and employees are unlawfully physically assaulted and require immediate medical attention away from the scene. The FY23 target was set to improve over FY22.

Bus NTD Reportable Assault Rate against dotted line target

Y: # assaults per 10m vehicle revenue miles | X: month
Direction of desired performance: **down** ↓

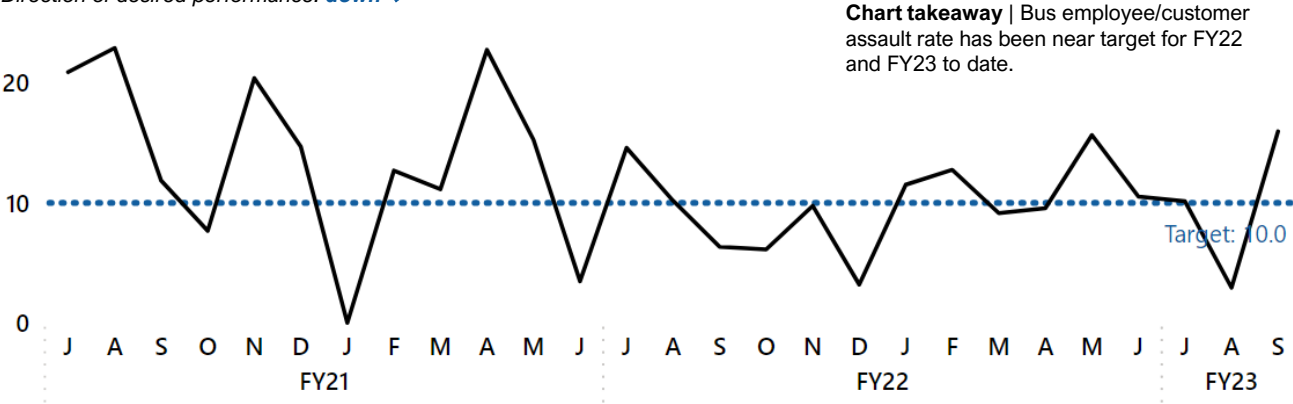


Chart takeaway | Bus employee/customer assault rate has been near target for FY22 and FY23 to date.

In response to an increase in bus operator assaults, Metro adjusted organization procedure for addressing challenging situations with customers on buses to emphasize that bus operators should secure the bus, contact the Bus Operations Control Center, and engage law enforcement when necessary.

Additionally, bus operators are reminded not to engage with fare evaders and given de-escalation training and dispute resolution strategies.

To prevent customer assaults, Metro Transit Police are increasing presence on bus routes and train stations where they commonly occur.



RAIL EMPLOYEE INJURIES

3.6 Rail employee injuries per 200,000 work hours, meeting target of no more than 3.6

Forty-nine rail employees reported injuries during Q1 of FY23. Stress and struck by/against injuries were the most common, each accounting for 20 percent, or 10, of the reported injuries this quarter. Slip/trip/falls made up 18 percent, or nine, of the quarter's injuries.

Measure Details: What and Why
This is an important measure of maintaining a safe environment for Metro's employees at work. This measure includes employee injuries that meet the Occupational Safety and Health Administration (OSHA) reporting criteria. The FY23 target was set to maintain average performance levels achieved over the past five years.

Rail System Employee Injury Rate against dotted line target

Y: # of injuries per 200,000 work hours | X: month
Direction of desired performance: **down** ↓

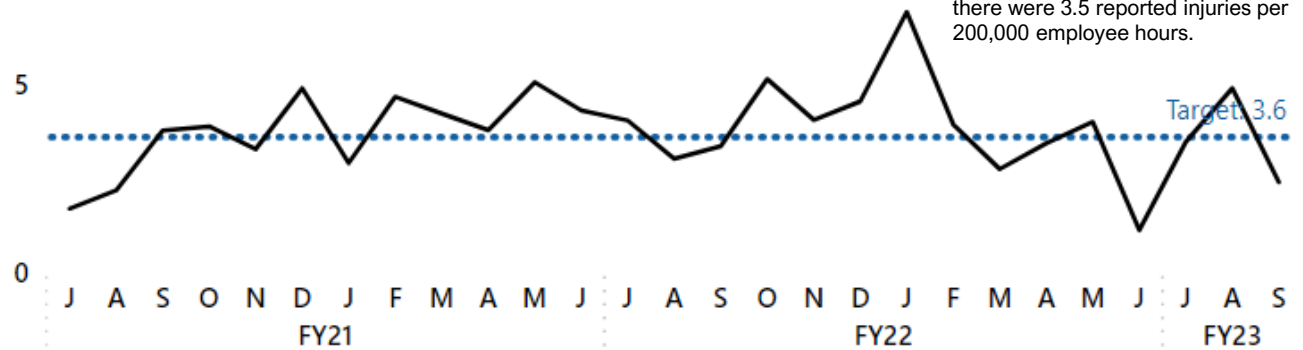


Chart takeaway | Although rail employee injury rate has decreased over the past two fiscal years, it is slightly higher than Q1 of FY22, when there were 3.5 reported injuries per 200,000 employee hours.

Reducing stress and assault injuries is a top concern for Metro. Of the ten stress injuries this quarter, half were related to employees witnessing violent acts at a station. The Metro Transit Police Department launched Operation “HelpingHands” to increase the visibility of uniformed and plain clothes officers in high crime stations interacting with passengers and employees. Station Managers and Supervisors take de-escalation training to learn techniques to prevent or manage verbal and physical assaults.



BUS EMPLOYEE INJURIES

11 Bus employee injuries per 200,000 work hours, meeting target of no more than **11.9**

There were 106 bus employee injury reports through Q1 of FY23. This is a 10 percent decrease from the same time period of last fiscal year. Collision-related injury reports (41) were the most common, followed by stress injury reports (27).

Measure Details: What and Why
This is an important measure of maintaining a safe environment for Metro's employees at work. This measure includes employee injuries that meet the Occupational Safety and Health Administration (OSHA) reporting criteria. The FY23 target was set to maintain average performance levels achieved over the past five years.

Bus Employee Injury Rate against dotted line target

Y: # of injuries per 200,000 work hours | X: month
Direction of desired performance: **down** ↓

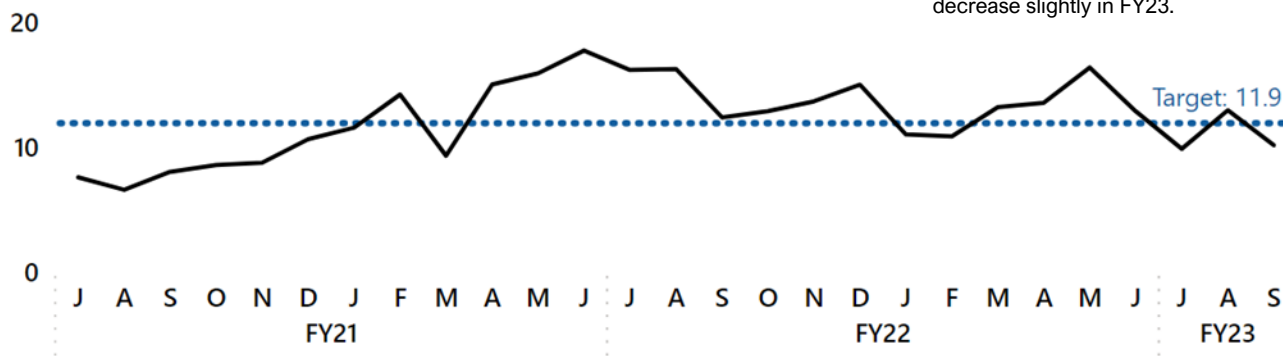


Chart takeaway | The bus employee injury rate steadily increased over FY21, stabilized in FY22, and has begun to decrease slightly in FY23.

At Metro, everyone is responsible for safety and all employees have the right and the responsibility to make recommendations about improving safety.

To enable this, Metro holds regular in-person and online forums to gather feedback from employees regarding hazards at facilities and on the road, and to collaborate on creating timely solutions to mitigate those hazards.

Additionally, Metro uses regular safety observations between managers and staff to ensure that safety procedures are followed in daily activities and embed a safety mindset in all employees.



PERFORMANCE MEASURE DEFINITIONS

PERFORMANCE MEASURE DEFINITIONS

RIDERSHIP

How is it measured?

Metrorail passenger trips + Metrobus passenger boardings + MetroAccess passenger trips

Ridership is a measure of total service consumed and an indicator of value to the region. Drivers of this indicator include service quality and accessibility.

What does this mean and why is it key to our strategy?

Passenger trips are defined as follows:

- **Metrorail** reports passenger trips. A passenger trip is counted when a customer enters through a faregate. In an example where a customer transfers between two trains to complete their travel one trip is counted.
- **Metrobus** reports passenger boardings. A passenger boarding is counted via the onboard Automatic Passenger Counter (APC) when a customer boards a Metrobus. In an example where a customer transfers between two Metrobuses to complete their travel two trips are counted. Metrobus totals also include shuttles* to accommodate rail station shutdowns and other track work, but does not include shuttles operated by a contracted vendor.
- **MetroAccess** reports passenger trips. A passenger traveling from an origin to a destination is counted as one passenger trip. Passengers include customers, personal care attendants (PCAs), and companions in accordance with ADA regulations.

*Metro does not include bus shuttle passenger trips in its budget or published ridership forecasts.

CUSTOMER SATISFACTION

How is it measured?

Survey respondent rating = Number of survey respondents (active riders) who marked their last Metrorail/Metrobus/MetroAccess trip as “very satisfactory” OR the second highest category in a five-point scale ÷ Total number of respondents

What does this mean and why is it key to our strategy?

Surveying customers about the quality of Metro’s service delivery provides a mechanism to continually identify those areas of the operation where actions to improve the service can maximize rider satisfaction.

Customer satisfaction is defined as the percent of customer survey respondents who rated their *last trip within a 30-day period* on Metrobus, Metrorail, or MetroAccess as a “5” or “4” in the customer satisfaction survey, with “5” denoting “very satisfied” and “1” denoting “very unsatisfied”. Metro distributes this survey through address-based sampling on a biweekly basis, and respondents must meet specific criteria to participate. Results are summarized quarterly.

METRORAIL SERVICE MISSED

How is it measured?

Percentage of service missed = Number of revenue service stops missed ÷ Number of scheduled revenue stops

What does this mean and why is it key to our strategy?

Missed Service monitors Metro's "guarantee of service"—whether Metro is providing all the service that was scheduled and committed to. It helps to offer more clarity on the relative magnitude of various operational issues on daily rail operation, for example, operator or railcar shortage, and incident response strategy. It is an important indicator of transit service quality and productivity. Those missed stops can have a negative impact on the perceived reliability of rail service and can result in longer customer wait times, missed transfers, etc. which lead to customer inconvenience and dissatisfaction.

METROBUS SERVICE DELIVERED

How is it measured?

Percentage of service delivered = Number of trips provided ÷ Number of scheduled trips

What does this mean and why is it key to our strategy?

Metrobus service delivered tells us whether Metro is meeting its level of service that we have committed to our customers through the budget and scheduling process. It is also a key measure of reliability; when trips are missed, customers experience much longer wait times than expected and it reduces the overall confidence in the system. Monitoring whether service was delivered helps Metro understand where there are issues with staffing, planning and scheduling, bus availability and reliability, and service interruptions.

METROBUS PREDICTION AVAILABILITY

How is it measured?

Percentage prediction availability = Number of trips with real time prediction made available in GTFS-RT ÷ Number of scheduled trips

What does this mean and why is it key to our strategy?

Prediction availability communicates how likely it is that Metro is using real time location information to generate the predicted arrival times of buses that customers see on BusETA or other third-party trip planning applications. When real time location information is not available, applications will either show provide no prediction information for the bus or substitute the scheduled arrival time. Both of these alternatives are far less reliable than real time data and negatively impact the customer experience through extended wait times and lack of clarity on when their next bus will arrive.

Predictions can be unavailable for two main reasons:

1. Missed Trips: No real time location information was provided because service was cut for the scheduled trip

2. **Bus Communication Failure:** No real time location information was provided because of a technical issue with the bus. In these cases, service is provided, but customers do not have real time location information to track it.

METROBUS PREDICTION ACCURACY

How is it measured?

Percentage prediction accuracy = Number of accurate predictions ÷ Number of scheduled trips

What does this mean and why is it key to our strategy?

Bus Prediction Accuracy measures the quality of Metro's real time arrival prediction data that customers use to plan their trips through BusETA and other third-party trip planning applications. The predictions are compared to the actual time the bus arrived at the stop according to Metro internal records.

Which predictions are evaluated?

To make the measure as customer focused as possible, only the most meaningful predictions are evaluated. Buses begin making predictions well before they begin service on a particular trip and can make predictions for stops hours before they are scheduled to arrive. Customers typically only use prediction information to plan in the very near term and are mostly only looking for the next arrival. To account for this, predictions made well in advance are thrown out, and only predictions made within 30 minutes of the bus's arrival are evaluated.

What is considered accurate?

Bus Prediction Accuracy is measured by comparing the predicted time of arrival to the actual time of arrival. A perfect prediction is when the predicted arrival time and the actual arrival time match exactly, but it is rare for a predicted and actual arrival to match to the second. The goal is not to be perfect, but to provide customers with enough good information so they can effectively plan their trips and are not waiting long periods of time for the bus. Therefore, the measure creates a range of allowable error within which a prediction is considered accurate, and if the prediction falls outside that range, it is considered inaccurate.

The accuracy range follows two key principles:

1. **As the bus gets closer to the stop, predictions should become more accurate.** Errors have greater customer impact when the bus is closer to the stop. Customers are more likely to use these predictions and a two minute difference has a greater impact if the bus is five minutes away than when the bus is 25 minutes away
2. **A bus arriving before its predicted arrival (Early) is worse than a bus arriving after its predicted arrival (Late).** If customers follow predictions exactly, they will miss their bus if the bus was earlier than its prediction.

Using these principles, the following time ranges are used to determine whether a prediction is accurate:

Time before arrival	Lower Bound (Early)	Upper Bound (Late)
0-3 mins	-1 min	1 min

3-6 mins	-1.5 mins	2 mins
6-12 mins	-2.5 mins	3.5 mins
12-30 mins	-4 mins	6 mins

Prediction Accuracy is the number of predictions that fall within these ranges out of all predictions made within 30 minutes of a bus's arrival.

METRORAIL CUSTOMER ON-TIME PERFORMANCE (MYTRIP TIME)

How is it measured?

Percentage of customer journeys completed on time = Number of journeys completed on time ÷ Total number of journeys

What does this mean and why is it key to our strategy?

Rail Customer On-Time Performance (OTP) communicates the reliability of rail service, which is a key driver of customer satisfaction. OTP measures the percentage of customers who complete their journey within the maximum amount of time it should take per WMATA service standards. The maximum time is equal to the train run-time + a headway (scheduled train frequency) + several minutes to walk between the fare gates and platform. These standards vary by line, time of day, and day of the week. Actual journey time is calculated from the time a customer taps a SmarTrip® card to enter the system, to the time when the SmarTrip® card is tapped to exit.

Factors that can affect OTP include: railcar availability, fare gate availability, elevator and escalator availability, infrastructure conditions, speed restrictions, single-tracking around scheduled track work, railcar delays (e.g., doors), or delays caused by sick passengers.

METROBUS ON-TIME PERFORMANCE

How is it measured?

Percentage of bus service delivered on-time = Number of timepoints delivered on time based on a window of 2 minutes early and 7 minutes late ÷ Total number of timepoints delivered

“Timepoints” are major stops on a bus route that are used to create bus schedules.

What does this mean and why is it key to our strategy?

Bus on-time performance (OTP) communicates the reliability of bus service, which is a key driver of customer satisfaction and ridership.

Factors that can affect OTP include: traffic congestion, detours, inclement weather, scheduling, vehicle reliability, operational behavior, or delays caused by the public (crime, protests, medical emergencies, etc.)

METROACCESS ON-TIME PICKUP PERFORMANCE

How is it measured?

Adherence to Schedule = Number of vehicle arrivals at the pick-up location within the 30-minute on-time window ÷ Total stops

What does this mean and why is it key to our strategy?

This indicator illustrates how closely MetroAccess adheres to customer pick-up windows on a system-wide basis. MetroAccess customers schedule trips at least one day in advance, and are given a 30-minute pick-up window. MetroAccess on-time pick-up performance is essential to delivering quality service to the customer.

ELEVATOR / ESCALATOR AVAILABILITY

How is it measured?

In-service percentage = Hours in service ÷ Operating hours

Hours in service = Operating hours – Hours out of service

Operating hours = Operating hours per unit x number of units

What does this mean and why is it key to our strategy?

Escalator/elevator availability is a key component of customer satisfaction with Metrorail service. This measure communicates system-wide escalator and elevator performance (at all stations over the course of the day) and will vary from an individual customer's experience.

Availability is the percentage of time that Metrorail escalators or elevators in stations and parking garages are in service during operating hours.

Customers access Metrorail stations via escalators to the train platform, while elevators provide an accessible path of travel for persons with disabilities, seniors, customers with strollers, and travelers carrying luggage.

An out-of-service escalator requires walking up or down a stopped escalator, which can add to travel time and may make stations inaccessible to some customers. When an elevator is out of service, Metro is required to provide alternative services which may include shuttle bus service to another station.

METRORAIL CROWDING

How is it measured?

Percentage of passenger time spent on vehicles exceeding crowding guidelines = Number of crowded passenger minutes ÷ Total number of passenger minutes

What does this mean and why is it key to our strategy?

Crowding is a key driver of customer satisfaction with Metrorail service. Crowding measures the percentage of passenger time spent on vehicles that exceed crowding guidelines per WMATA service standards of 100 passengers per car. In FY23, WMATA returned to the pre-pandemic definition of crowding.

Crowding informs decision making regarding asset investments, service plans and scheduling.

Factors that can affect crowding include: service reliability, missed trips insufficient schedule, or unusual demand.

METROBUS CROWDING

How is it measured?

Percentage of passenger time spent on vehicles exceeding crowding guidelines = Number of crowded passenger minutes ÷ Total number of passenger minutes

What does this mean and why is it key to our strategy?

Crowding is a key driver of customer satisfaction with Metrobus service. Crowding measures the percentage of passenger time spent on vehicles that exceed crowding guidelines per WMATA service standards of 120% of seated capacity during peak for BRT, framework, and coverage routes, 100% off peak and at all times on commuter routes. In FY23, WMATA returned to the pre-pandemic definition of crowding.

Crowding informs decision making regarding asset investments, service plans and scheduling. Factors that can affect crowding include: service reliability, missed trips insufficient schedule, or unusual demand.

Note: Prior to the adoption of the Metrobus Service Guidelines in December 2020, crowding guidelines were 120% of seated load for all services except express bus during peak.

METRORAIL FLEET MEAN DISTANCE BETWEEN FAILURE

How is it measured?

Mean Distance Between Failure (MDBF) = Total railcar revenue miles ÷ Total number of failures occurring during revenue service

What does this mean and why is it key to our strategy?

The number of miles traveled before a railcar experiences a failure. Some car failures result in inconvenience or discomfort, but do not always result in a delay of service (such as hot cars).

Mean Distance Between Failure communicates the effectiveness of Metro's railcar maintenance and engineering program. Factors that influence railcar reliability are the age and design of the railcars, the amount the railcars are used, the frequency and quality of preventive maintenance, and the interaction between railcars and the track.

METROBUS FLEET MEAN DISTANCE BETWEEN FAILURE

How is it measured?

Mean Distance Between Failures (MDBF) = Total bus mileage ÷ Total number of bus mechanical failures occurring during revenue service

What does this mean and why is it key to our strategy?

Mean Distance Between Failures is used to monitor trends in vehicle breakdowns that cause buses to go out of service in order to plan corrective actions. Factors that influence bus fleet reliability include vehicle age, quality of maintenance program, original vehicle quality, and road conditions such as inclement weather and road construction.

METROACCESS FLEET MEAN DISTANCE BETWEEN FAILURE

How is it measured?

Mean Distance Between Failures (MDBF) = Total MetroAccess vehicle odometer miles ÷ Total number of mechanical failures occurring during revenue service

What does this mean and why is it key to our strategy?

The number of total miles traveled before a mechanical breakdown requiring the van to be removed from service or deviate from the schedule

Mean Distance Between Failures is used to monitor trends in vehicle breakdowns that cause vans or sedans to go out of service and to plan corrective actions. Factors that influence MetroAccess fleet reliability include vehicle age, quality of maintenance program, original vehicle quality, and road conditions affected by inclement weather and road construction.

PART 1 CRIME RATE

How is it measured?

Part I Crime Rate = Number of Part 1 Crimes ÷ (Number of passengers ÷ 1,000,000)

In other words, the number of crimes per million passenger trips

What does this mean and why is it key to our strategy?

The FBI's Uniform Crime Reporting program classifies the following as Part 1 Crimes: Criminal Homicide, Forcible Rape, Robbery, Aggravated Assault, Burglary, Larceny, Motor Vehicle Theft, and Arson. To calculate Metro's Part 1 Crime Rate, MTPD looks at these crimes committed: 1) on buses and bus stops, 2) on trains and in rail stations, 3) at Metro-owned parking lots, 4) at other Metro Facilities such as rail yards, bus divisions, headquarters, and MetroAccess vehicles, and 5) in a non-WMATA location but involving WMATA or MTPD property.

This measure provides an indicator of the perception of safety and security customers experience when traveling the Metro system. Increases or decreases in crime can influence whether customers feel safe in the system.

SAFETY EVENT RATE

How is it measured?

Safety Event Rate = Number of safety events that meet "major event" National Transit Database (NTD) reporting criteria ÷ (Total vehicle revenue miles ÷ 10 million)

In other words, the number of reportable safety events per 10 million revenue miles

What does this mean and why is it key to our strategy?

The types of safety events that would be included in this measure are: collisions, fires, derailments, hazardous material spills, acts of God, and a few other safety occurrences.

Customer and employee safety is the highest priority for Metro and a key measure of quality service. Customers expect a safe and reliable ride each day. The safety event rate is an indicator of how well the service is meeting this safety objective.

CUSTOMER INJURY RATE

How is it measured?

Customer injury rate = Number of customer injuries reported to the Federal Transit Administration ÷ (Total vehicle revenue miles ÷ 10 million)

In other words, the number of customer injuries per million trips

What does this mean and why is it key to our strategy?

The customer injury rate is based on National Transit Database (NTD) Reporting criteria. This measure includes customers injured during Metro operations when the injury requires immediate medical attention away from the scene.

Customer safety is the highest priority for Metro and a key measure of quality service. Customers expect a safe and reliable ride each day. The customer injury rate is an indicator of how well the service is meeting this safety objective.

CUSTOMER / EMPLOYEE FATALITY RATE

How is it measured?

Fatality Rate = Number of fatalities reported to the Federal Transit Administration ÷ (Total vehicle revenue miles ÷ 10 million)

In other words, the number of fatalities per 10 million revenue miles

What does this mean and why is it key to our strategy?

The Federal Transit Agency's Public Transportation Agency Safety Plan identified the fatality rate as a key safety performance measure. Reducing the number of fatalities is a top priority for all transit agencies. This measure includes customer and employee fatalities due to Metro operations and excludes those from suicide, homicide, trespassers, illnesses, drug overdoses, or other natural causes.

NTD-REPORTABLE ASSAULT RATE

How is it measured?

NTD-Reportable Assault Rate = Number of employee and customer assaults reported to the Federal Transit Administration ÷ (Total vehicle revenue miles ÷ 10 million)

In other words, the number of reportable assaults per 10 million revenue miles

What does this mean and why is it key to our strategy?

The Federal Transit Administration criteria for reporting assaults is any unlawful physical assault upon an employee or customer of Metro while on Metro property that results in immediate medical attention away from the scene. These are different criteria than those used by OSHA in the employee injury rate.

Customer and employee safety is the highest priority for Metro and a key measure of quality service. Customers expect a safe and reliable ride each day. The assault rate is an indicator of how well the service is meeting this safety objective.

EMPLOYEE INJURY RATE

How is it measured?

Employee injury rate = Number of employee injuries reported to the Department of Labor ÷ (Total work hours ÷ 200,000)

200,000 hours is equivalent to 100 employees working full-time for one year. In other words: the number of employees injured per 100 employees

What does this mean and why is it key to our strategy?

An employee injury is recorded based on OSHA 1904 Recordkeeping Criteria, when the injury is (a) work related; and, (b) one or more of the following happens to the employee: 1) fatality, 2) injury or illness that results in loss of consciousness, days away from work, restricted work, or job transfer 3) receives medical treatment above first aid, 4) diagnosed case of cancer, chronic irreversible diseases, fractured or cracked bones or teeth, and punctured eardrums, 5) special cases involving needlesticks and sharps injuries, medical removal, hearing loss, and tuberculosis.

Per the Occupational Safety and Health Act, employers are obligated to provide a workplace free of recognized hazards which may cause employee death or serious injury. OSHA recordable injuries are a key indicator of how safe employees are in the workplace.