



TPB REGIONAL PUBLIC TRANSPORTATION SUBCOMMITTEE

Chair: Nick Ruiz, VRE

Tuesday, February 28, 2023
12:00 – 2:00 P.M.

VIRTUAL MEETING

Please see calendar appointment in February 17th email for meeting link.

AGENDA

- 12:00 P.M. 1. WELCOME AND INTRODUCTIONS**
Nick Ruiz, Regional Public Transportation Subcommittee Chair, VRE
- 12:15 P.M. 2. GREATER WASHINGTON PARTNERSHIP BUS TRANSFORMATION 2023 PROGRESS REPORT**
John Hillegass, Greater Washington Partnership; Laura Miller Brooks, Federal City Council
- 12:40 P.M. 3. DASH: UPDATE ON NETWORK REDESIGN & FREE FARE PROGRAM**
Martin Barna, DASH
- 1:05 P.M. 4. DDOT: BUS PRIORITY PROGRAM UPDATE**
Megan Kanagy, DDOT
- 1:30 P.M. 5. UPDATE ON REGIONAL ELECTRIC BUS INFRASTRUCTURE**
Pierre Gaunard, TPB Staff
- 1:45 P.M. 6. OTHER BUSINESS**
- HCT Map Update, *Charlene Howard and Tim Canan, TPB Staff*
- 2:00 P.M. 7. ADJOURN**
Nick Ruiz, Regional Public Transportation Subcommittee Chair, VRE

The next regular meeting of the RPTS is scheduled for March 28, 2023.

Reasonable accommodations are provided upon request, including alternative formats of meeting materials. Go to www.mwco.org/accommodations or call (202) 962-3300 | (202) 962-3213 (TDD) for more information.



MetroNow

2023 Washington Area Bus Transformation Project Progress Report



Bus Transformation Project

1. Provide frequent and convenient bus service
2. Give buses priority on roadways
3. Create an excellent customer experience
4. Empower a publicly appointed task force to transform the bus



WASHINGTON AREA
BUS TRANSFORMATION
PROJECT

Initiative Y:

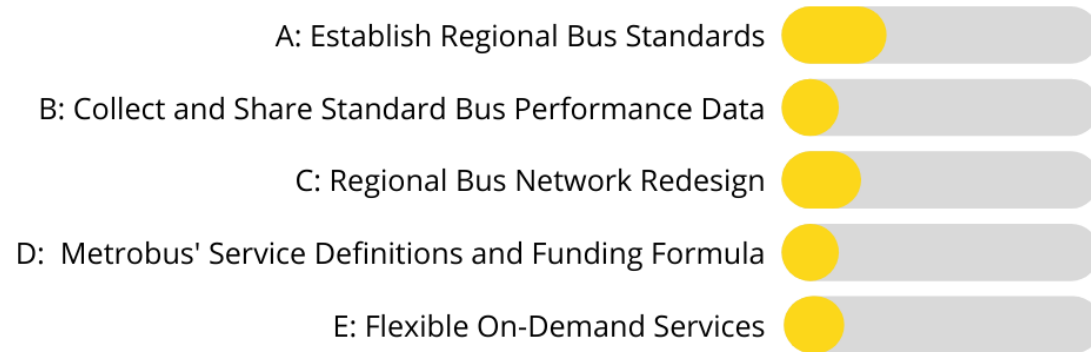
Facilitate an *independently published annual Progress Report* on Bus Transformation Strategy implementation and a Bus Performance Scorecard to track the level of service delivered to customers

Last Year's Progress Report

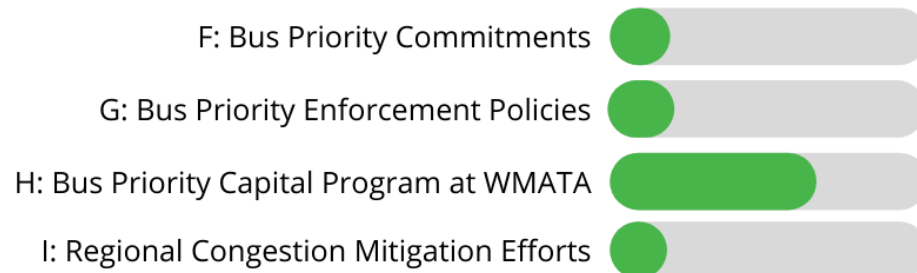
Initiative Dashboard

After two years, and amid a multi-year global pandemic, the region has made progress against all twenty-six of the BTP initiatives, but only kept four on-track according to the timelines set-forth in the original Action Plan.

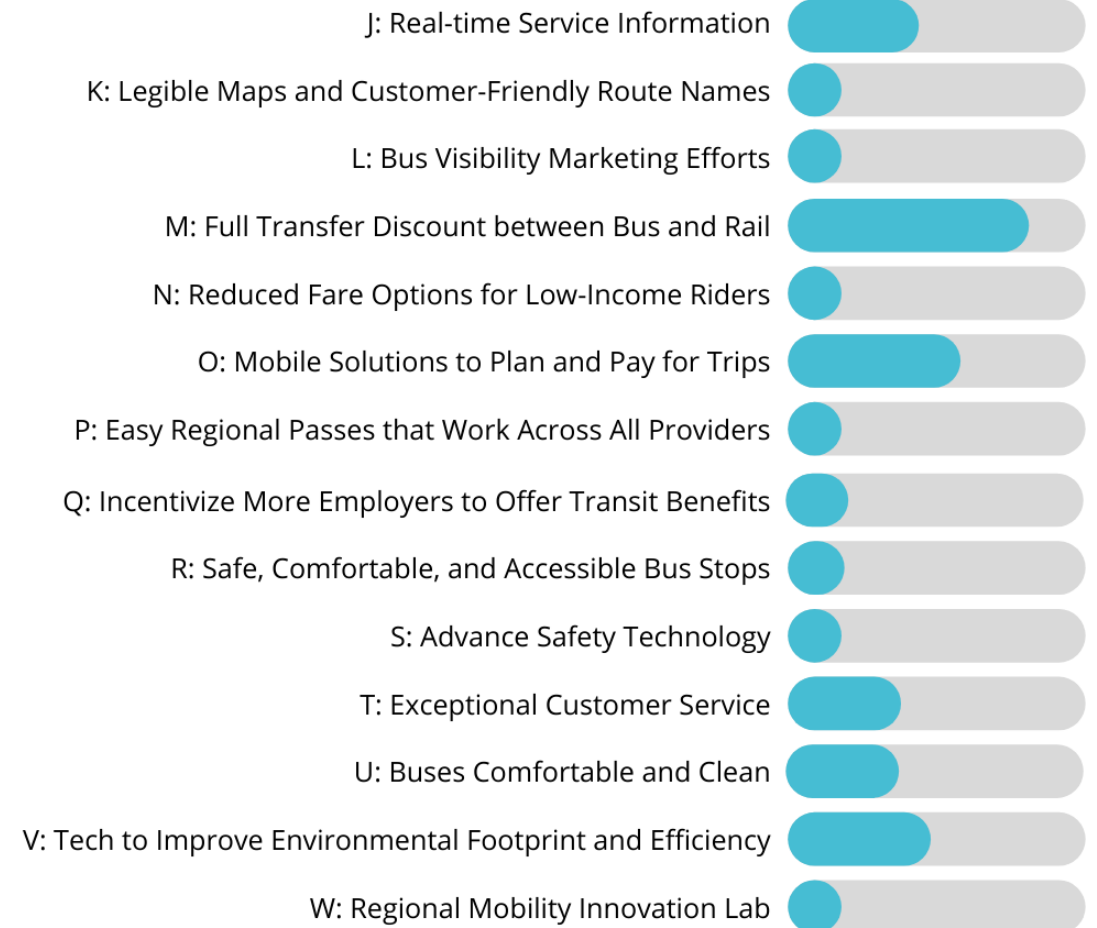
Strategy 1: Provide frequent and convenient bus service Progress



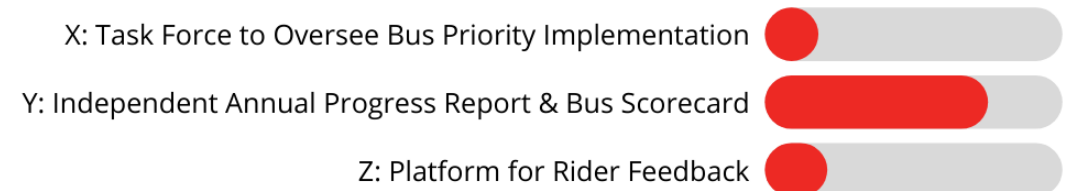
Strategy 2: Give buses priority on roadways Progress



Strategy 3: Create an excellent customer experience Progress



Strategy 4: Public Task Force to Empower the Bus Progress



MetroNow's 2022 Regional Bus Priorities

01 Launch Regional Bus Network Redesign

02 Build & Enforce 10 New Miles of Bus Lanes

03 Retain & Recruit Bus Operators

04 Zero Emissions Infra-structure & Workforce

05 Regional Bus Data & Best Practices

06 Address the Transit Funding Fiscal Cliff

Associated BTP Strategy

1. Provide frequent and convenient bus service

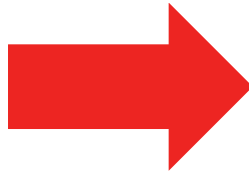
2. Give buses priority on roadways

3. Create an Excellent Customer Experience

4. Empower a Public Task Force to Transform the Bus

Change in Nomenclature

**4. Empower a
Public Task Force
to Transform
the Bus**



**4. Regional
Collaboration
to Transform
the Bus**



MetroNow

2023 Washington Area Bus Transformation Project Progress Report





MetroNow

Regional Bus Fast Facts

11.8 million

bus trips were taken around the region in Oct. 2022.

Bus vs Rail Recovery

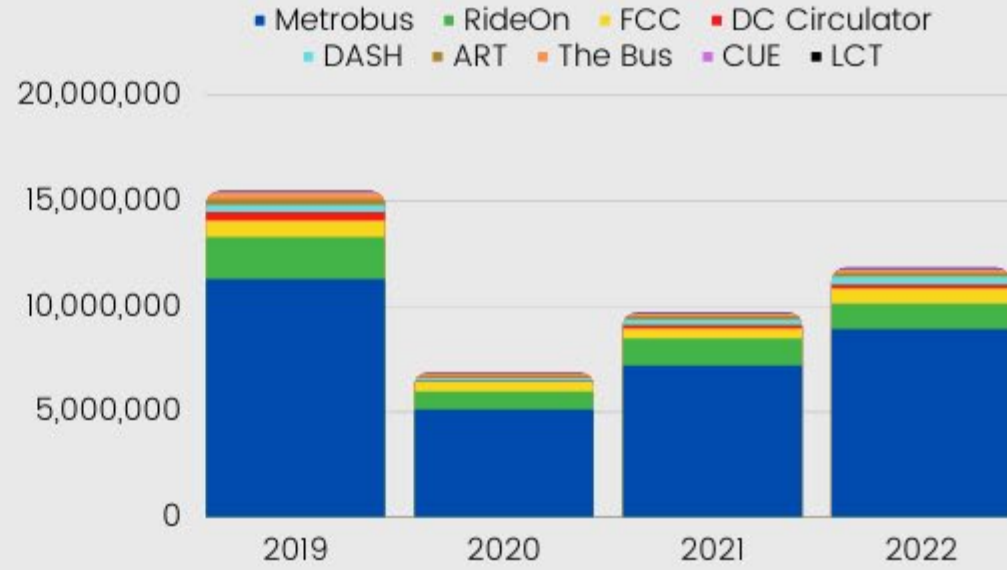
Rail 40%

Bus 77%

*Metrorail vs Regional Bus
Oct 2019 to Oct 2022*

Learn more at MetroNow.com

Regional Bus Ridership in October from 2019 to 2022



Source: National Transit Database

More people rode the bus than rail

11.8m bus trips in October 2022 compared to 9.1 m Metrorail trips





MetroNow

Bus Transformation Progress Report for 2022

Grades reflect regional progress
Learn more at MetroNow.com

01

Launch Regional Bus Network Redesign

A

02

Build & Enforce 10 New Miles of Bus Lanes

C-

03

Retain & Recruit Bus Operators

B

04

Zero Emissions Infra-structure & Workforce

C+

05

Regional Bus Data & Best Practices

C

06

Address the Transit Funding Fiscal Cliff

F



THE 2030 GROUP



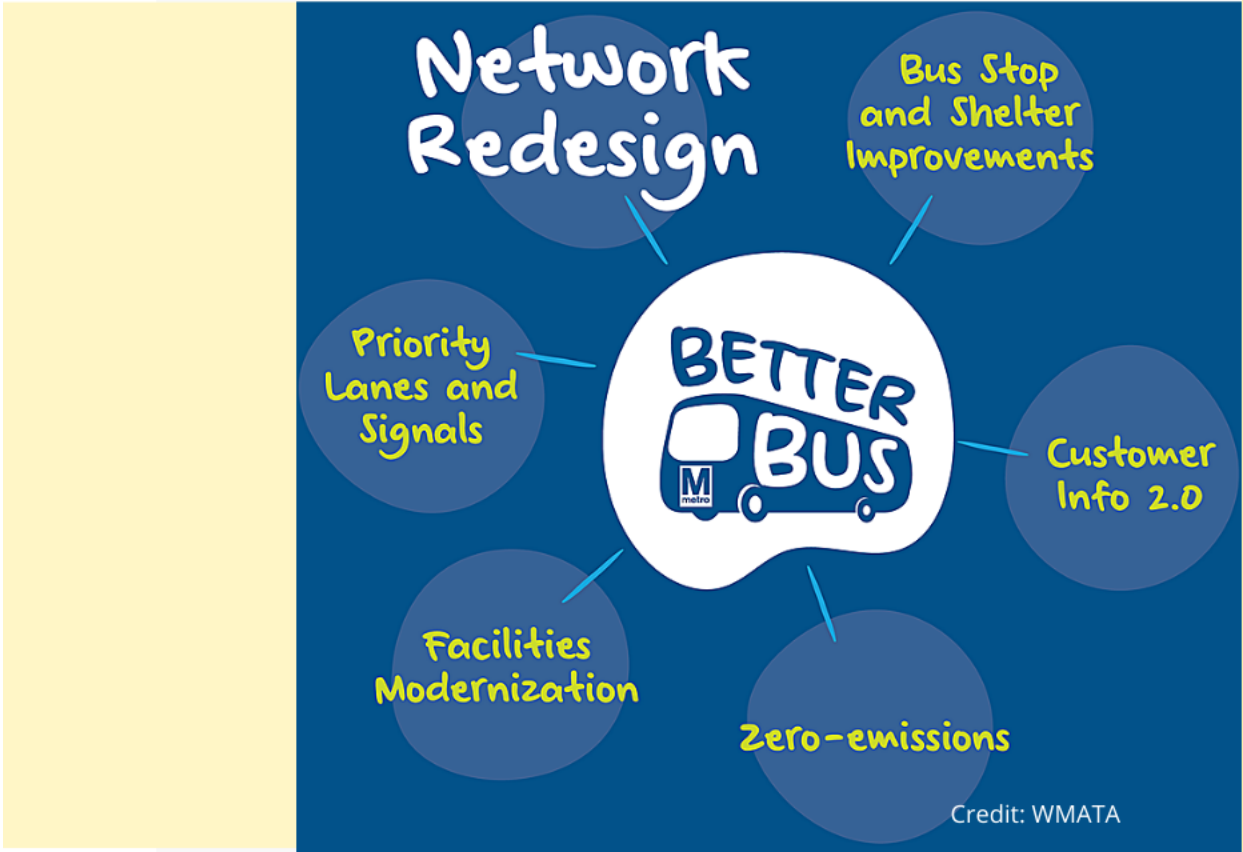
Launch Regional Bus Network Redesign



Regional Progress in 2022



WMATA's Better Bus Initiative & Ride On's Reimagined Study were launched.



Build & Enforce 10 New Miles of Bus Lanes



5.1 miles of new bus lanes were built in 2022

Miles of Transportation Infrastructure

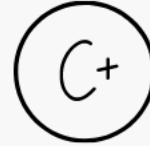
| | Dedicated Bus Lanes | Roadway Lanes | Bike Lanes |
|-----------------------|---------------------|---------------|------------|
| Maryland ¹ | 0.5 | 13,900+ | - |
| DC | 11.6 | 2,626 | 100+ |
| Virginia ² | 5 | 14,000+ | - |
| Washington Metro | 17.1 | 30,526+ | - |

¹ Within Prince George's and Montgomery Counties

² Within Northern Virginia District

All 5.1 miles of new bus lanes in 2022 were built in DC

Zero Emissions Infrastructure & Workforce



Regional Progress in 2022



Local wins but lacking a regional approach.

Note: Even switching from a car to a diesel bus reduces emissions.

FLEET SIZES & ZERO-EMISSIONS TARGETS

| | Metrobus | ART | DASH | DC Circulator | Fairfax Connector |
|-----------------|-------------------------|------------------------------------|-------------|---------------------------|-------------------|
| Fleet Size | 1,500 | 78 | 101 | 73 | 340 |
| Electric Buses | 1 (435 CNG; 861 Hybrid) | 0 (78 CNG) | 14 | 15 | 0 (8 BEB ordered) |
| ZEF Target Year | 2045 | - | 2037 | 2030 | 2035 |
| | Fairfax City CUE | Ride On | The Bus | Loudoun County Transit | |
| Fleet Size | 12 | 389 | 95 | 107 | |
| Electric Buses | 0 | 4 (10 BEB ordered; 13 HFC awarded) | 12 | 0 (2 BEB + 2 CNG ordered) | |
| ZEF Target Year | - | 2035 | 70% by 2035 | - | |

BEB: Battery Electric Bus; **CNG:** Compressed Natural Gas; **HFC:** Hydrogen Fuel Cell

Address the Transit Funding Fiscal Cliff

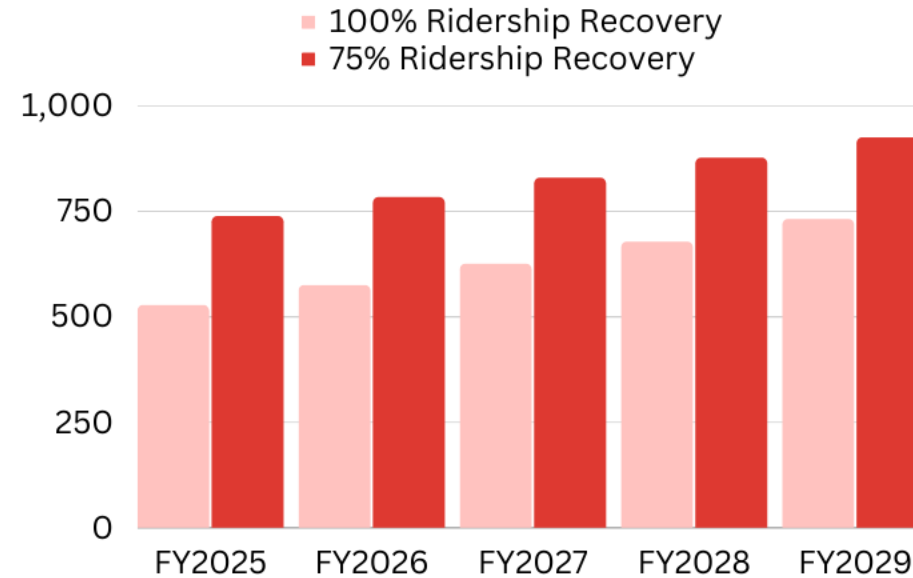


Regional Progress in 2022



WMATA expects a \$527m+ gap in FY '25 operating budget.

WMATA's Projected Operating Budget Gap in millions of \$



Source: WMATA, GM/CEO's FY2024 Proposed Operating and Capital Budget



MetroNow

MetroNow's 2023 Regional Bus Priorities

Learn more at MetroNow.com

- 01** Address the Transit Funding Fiscal Cliff by Identifying a Funding Model for Transit Preservation and Expansion
- 02** Align Behind a Better Bus Network Redesign Option
- 03** Build 10 Miles of New Dedicated Bus Lanes
- 04** Create a Regional Bus Stop Improvement Plan
- 05** Monitor Regional Policy & Investment Impacts



THE 2030 GROUP

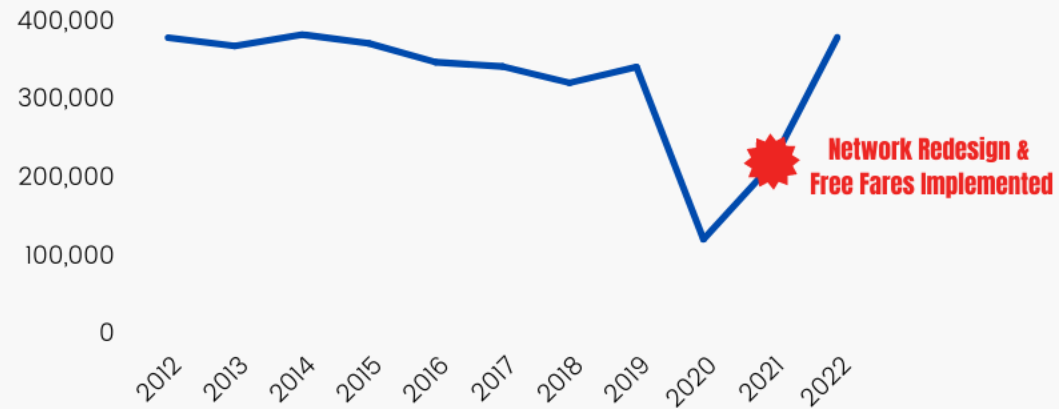


Trend to Watch in 2023 | Free Fares

According to DASH's customer survey, the biggest factor explaining their dramatic increase in ridership was the "increased frequency" from the network redesign, while the second biggest factor was "free fares".

DASH served 380k riders in September 2022, the most in a single month since 2015.

DASH Ridership (September)



Source: National Transit Database

DASH riders who started in last 12 months
22%

Riders using DASH more because it is free
71%

Thank you

Questions?

Contact John Hillegass

jhillegass@greaterwashingtonpartnership.com



GREATER WASHINGTON PARTNERSHIP

FROM BALTIMORE TO RICHMOND.
FOSTERING UNITY. ADVANCING GROWTH.



DASH FREE FARES PROGRAM REPORT

MWCOG REGIONAL PUBLIC
TRANSPORTATION SUBCOMMITTEE

FEBRUARY 28, 2023

FREE
RIDE

TODAY

DASH FREE FARES PROGRAM SUMMARY

- DASH eliminated fare collection in September 2021 as part of the launch of the New DASH Network.
- Funded by DRPT grant and increase in FY22 city subsidy;
- ATC Board adopted Fare Free Framework Policy in September 2021.



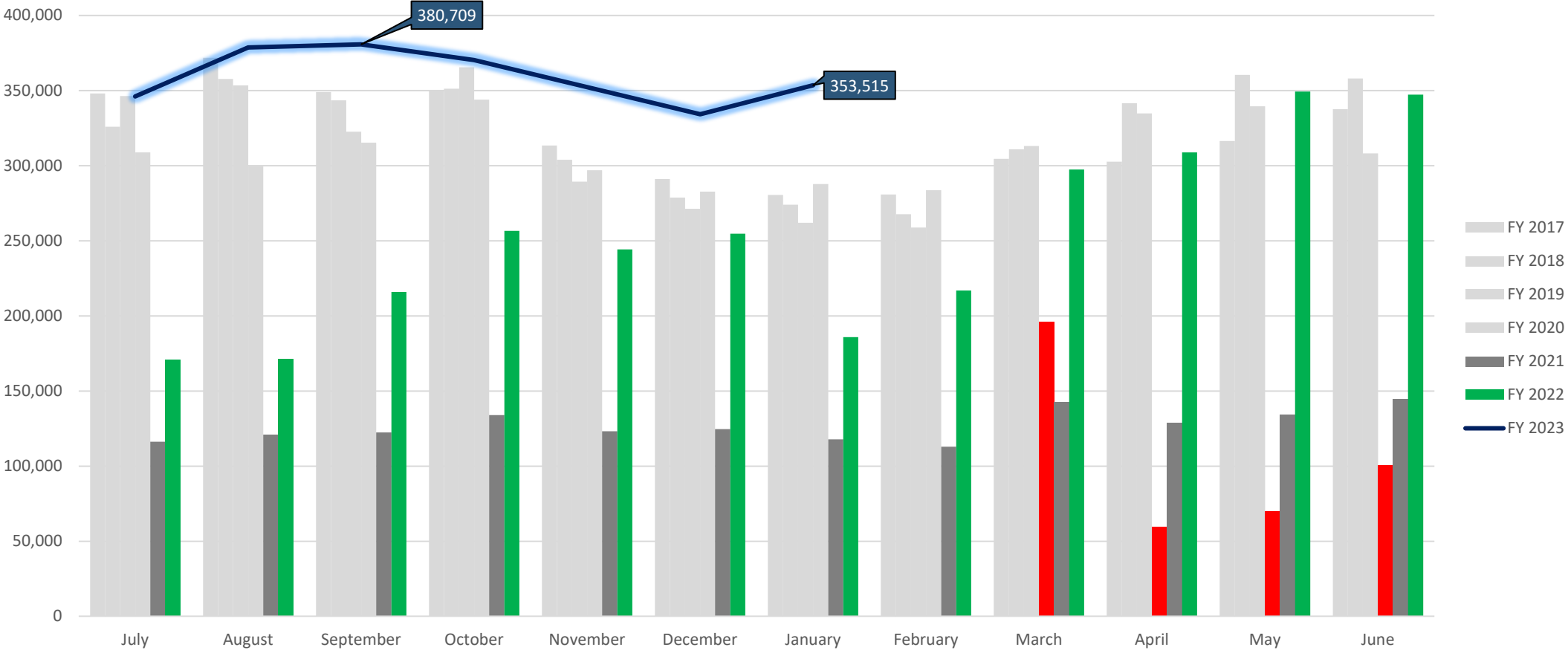
RIDERSHIP

- Average daily ridership has *doubled* in first year of free fares
- 380,000+ boardings in Sept. 2022 were highest since 2015, consistently surpassing pre-pandemic levels.
- Biggest ridership increases seen for middays, eves and weekends.
- Some overcrowding seen on Lines 31, 35 and 36 due to student riders



RIDERSHIP

DASH Total Monthly Ridership (FY2017-FY2023)



RIDERSHIP DATA CHALLENGES

- Loss of Ridership Data on Transfers & Fare Media Types
- Automated Passenger Counters (APC's) are undergoing NTD validation.
- Farebox Equipment



ALL DOOR BOARDING

- Entire DASH system transitioned to all-door boarding in April 2022.
- Some driver discretion is required for which stops are or are not suitable for all-door boarding.
- Generally positive feedback, though manual ridership data collection is more difficult.
- Future analyses of travel speeds to assess time savings.



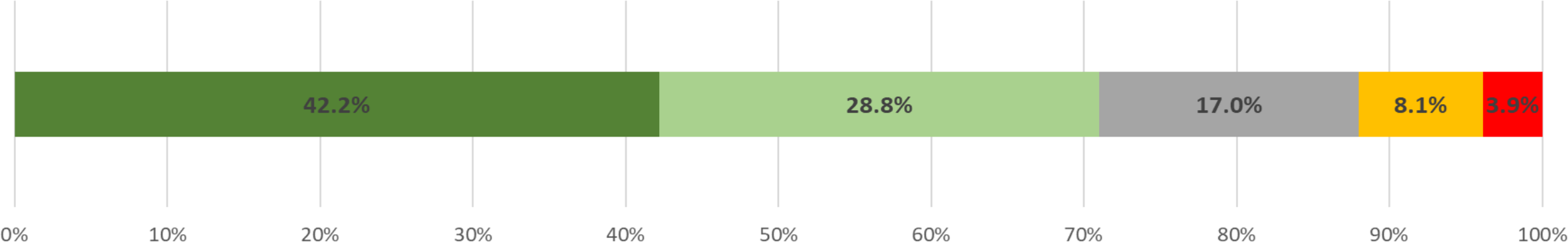
CUSTOMER SURVEY

- 71% of riders indicated that they are riding DASH more because it is free (80% among low-income riders).
- 22% of riders have started using DASH in last year; top factors were increased frequency (52%) and free fares (44%).
- 67% said free fares improved their perception of DASH service.
- Some concerns with overcrowding and feelings of onboard safety/comfort.



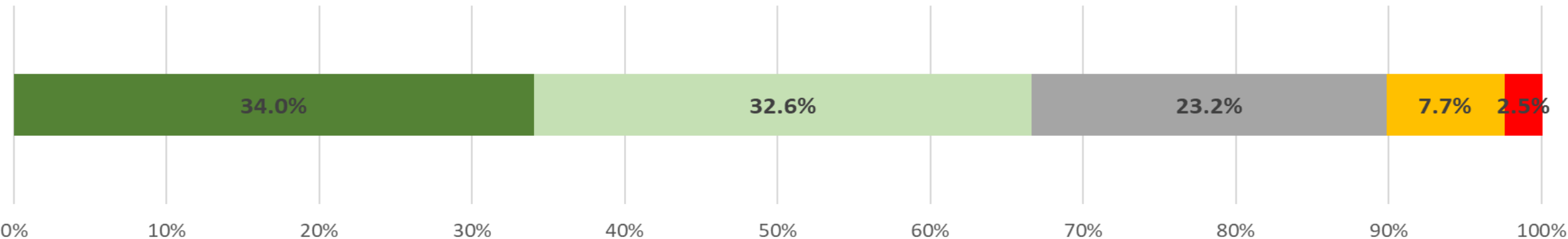
Q4. "I use DASH more often now than I have in the past because it is free to ride."

Strongly Agree Agree Neutral/Not Sure Disagree Strongly Disagree



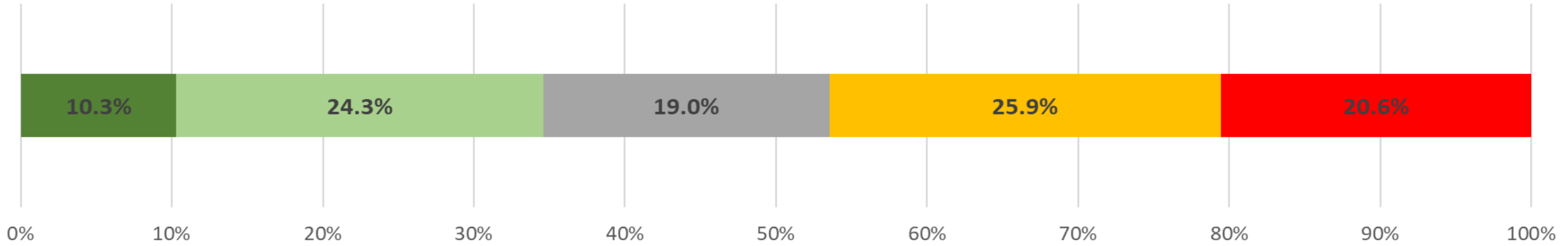
Q9. "Free Fares have improved my overall perception of DASH service."

Strongly Agree Agree Neutral/Not Sure Disagree Strongly Disagree



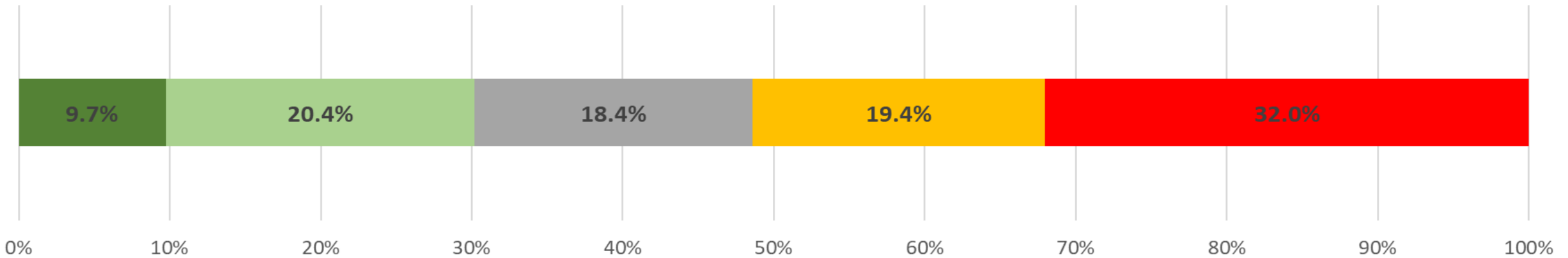
Q7. "My bus is sometimes too crowded because it is free to ride."

Strongly Agree Agree Neutral/Not Sure Disagree Strongly Disagree

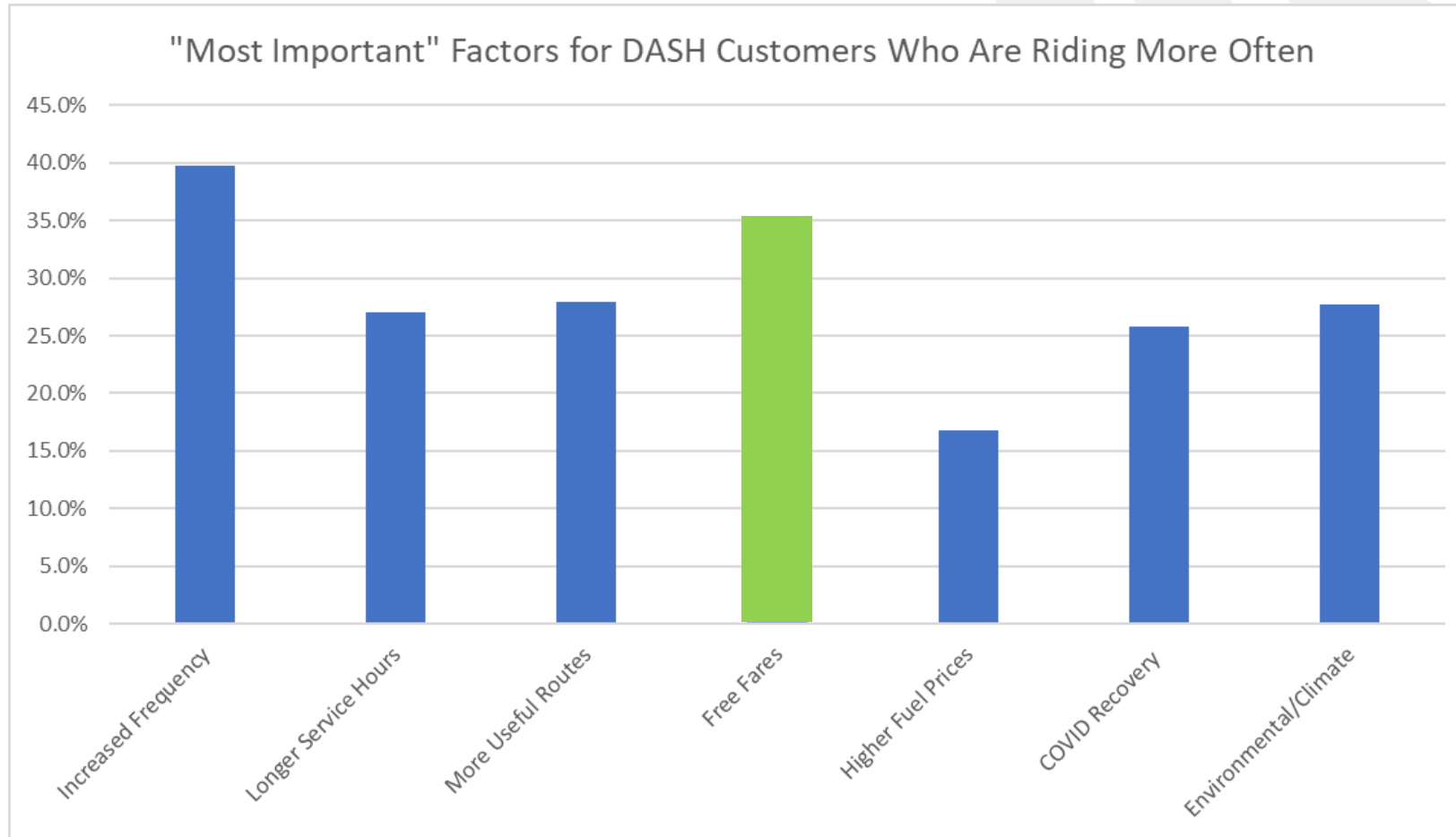


Q8. "Free fares have had a negative impact on my feelings of comfort/safety while riding DASH."

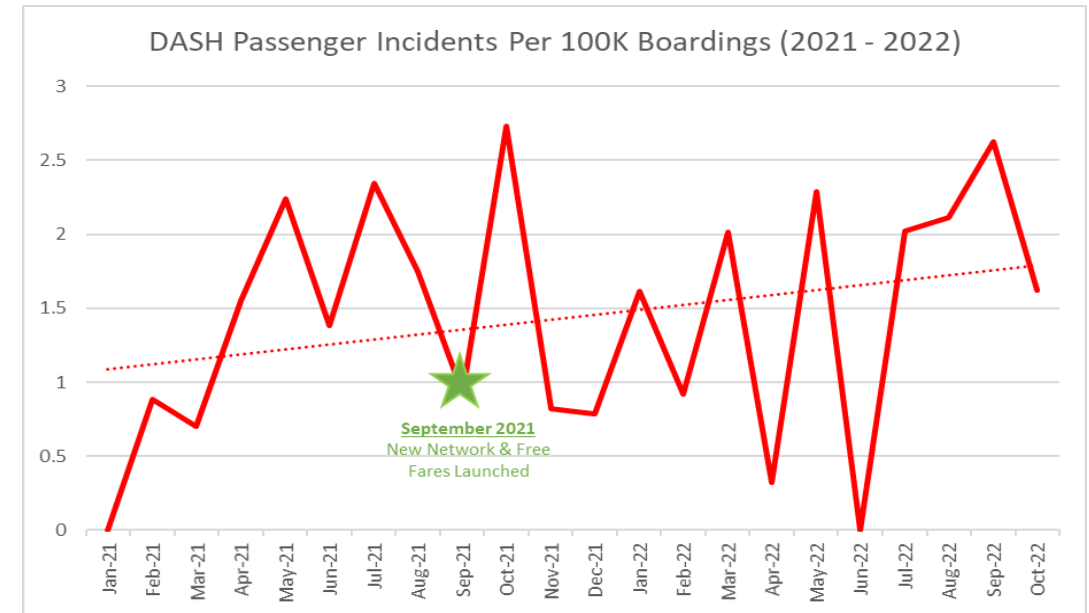
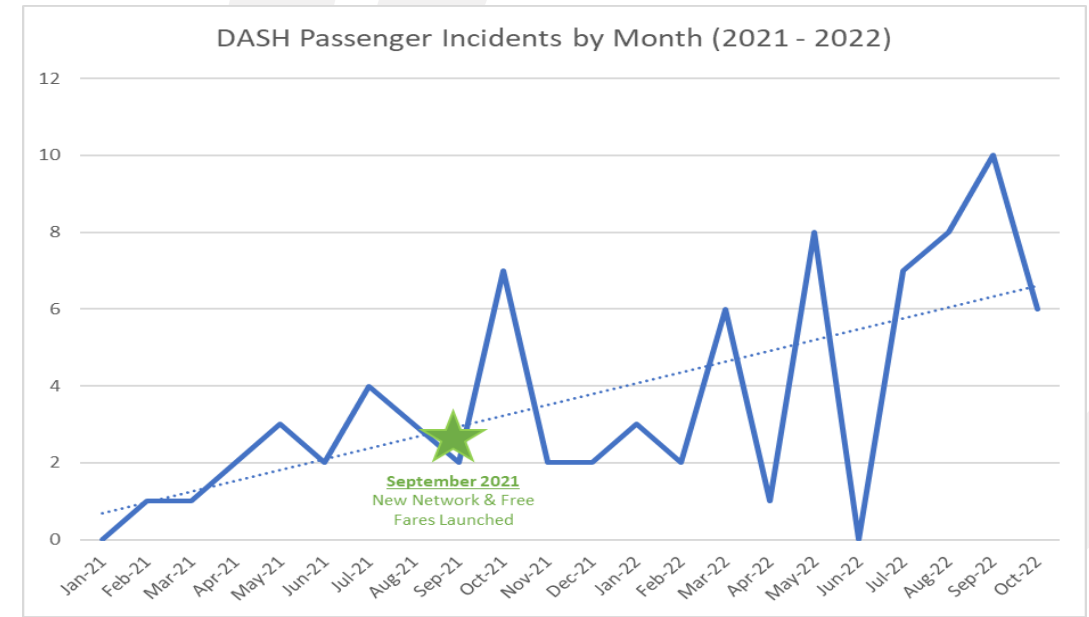
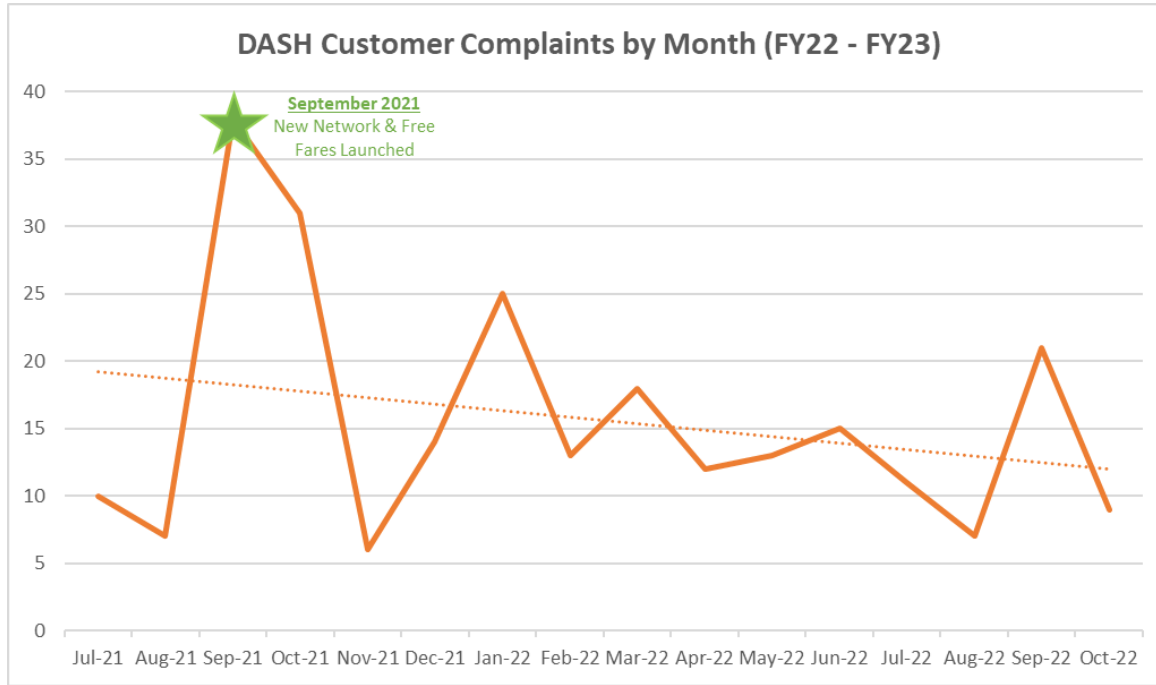
Strongly Agree Agree Neutral/Not Sure Disagree Strongly Disagree



CUSTOMER SURVEY (FALL 2022)

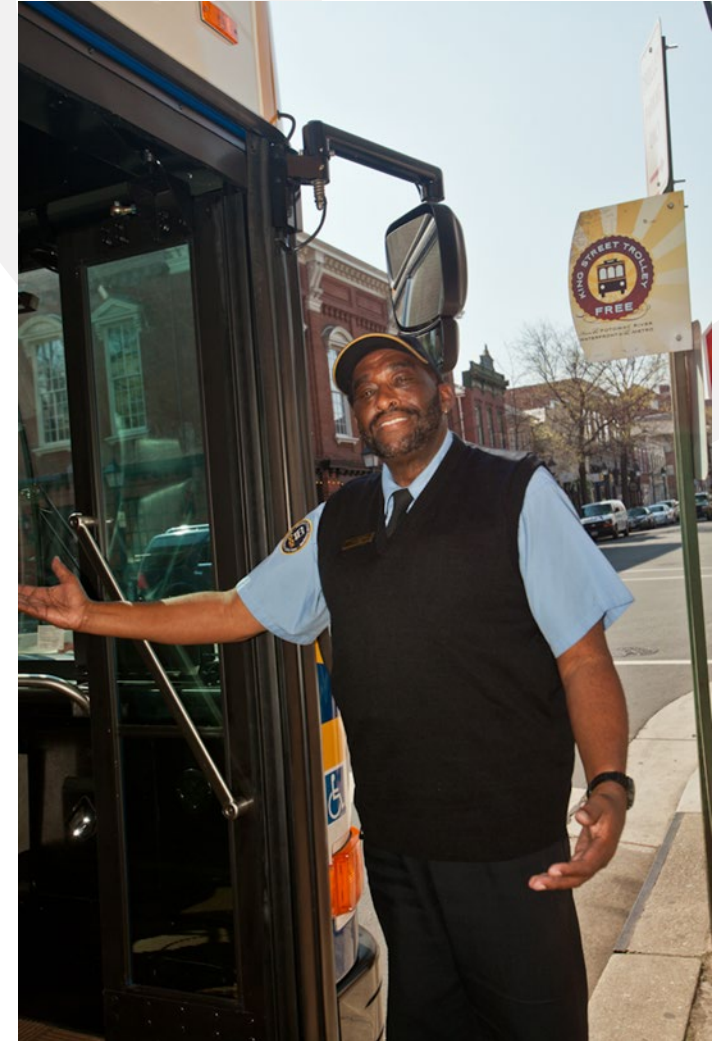


CUSTOMER COMPLAINTS & INCIDENTS



OPERATOR FEEDBACK

- Generally positive with elimination of fare collection responsibilities.
- Operator survey found slight increases in job satisfaction and perceived safety.
- Slight increase in number of incidents with unruly/disruptive passengers due to higher ridership; additional training has been introduced for new operators.
- Manual ridership data counting can be difficult but will be discontinued in 2023.



BUDGETARY IMPACT

- Lost fare revenues in FY22 were offset by increased city subsidy and DRPT grant funding from TRIP program.
- Additional cost savings:
 - Termination of cash collection contract
 - Discontinuation of DASH Bus app
 - Reduced labor for farebox maintenance
 - Annual SmarTrip contribution (Future)
- Cancellation of \$5 million capital project to replace fareboxes on entire bus fleet.



FINDINGS & CONCLUSIONS

- Free fares have achieved goals of increasing ridership, promoting new network and helping low-income riders.
- Historic ridership growth in first year; now exceeding pre-COVID ridership. Some issues with overcrowding particularly with more students riding.
- Positive customer feedback from survey responses; free fares are major factor in ridership growth, particularly for low-income riders.
- Generally positive feedback from operators, however, minor increase in negative passenger incidents due to ridership growth.
- Grant awards and other cost savings and offset budget impacts in FY22.



QUESTIONS / DISCUSSION?

Martin Barna / DASH
Director of Planning & Marketing
martin.barna@alexandriava.gov



DDOT Bus Priority Program: Quick Build Projects

TPB RPTS Meeting

February 28, 2023



WE ARE WASHINGTON
GOVERNMENT OF THE
DISTRICT OF COLUMBIA
DC MURIEL BOWSER, MAYOR

Bus Priority Vision

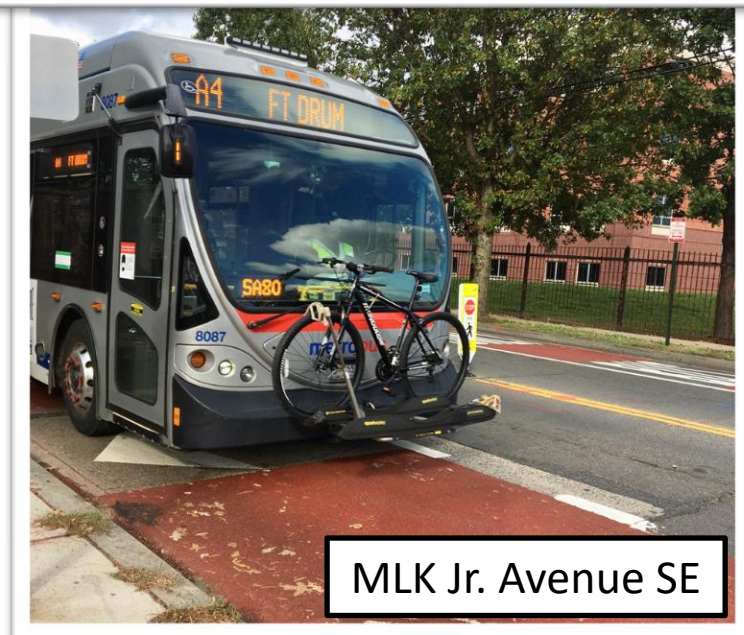
- Improve bus speeds and reliability for riders across all eight wards of the District
- Faster and more reliable transit provides better access to more jobs and opportunity
- Almost half of District Metrobus riders make under \$30,000 per year and two thirds live in zero-car households*
- Improve the entire rider experience



**2018 WMATA Metrobus rider survey*

What's on the Ground

- 13.3 lane-miles of red bus lanes...and counting!
- Transit signal priority and queue jumps at over 200 intersections



The District's Commitment

Expedited delivery of 51 bus
priority projects

Mayor Bowser's FY22 budget

25 lane-miles of bus lanes by
2025

moveDC strategy

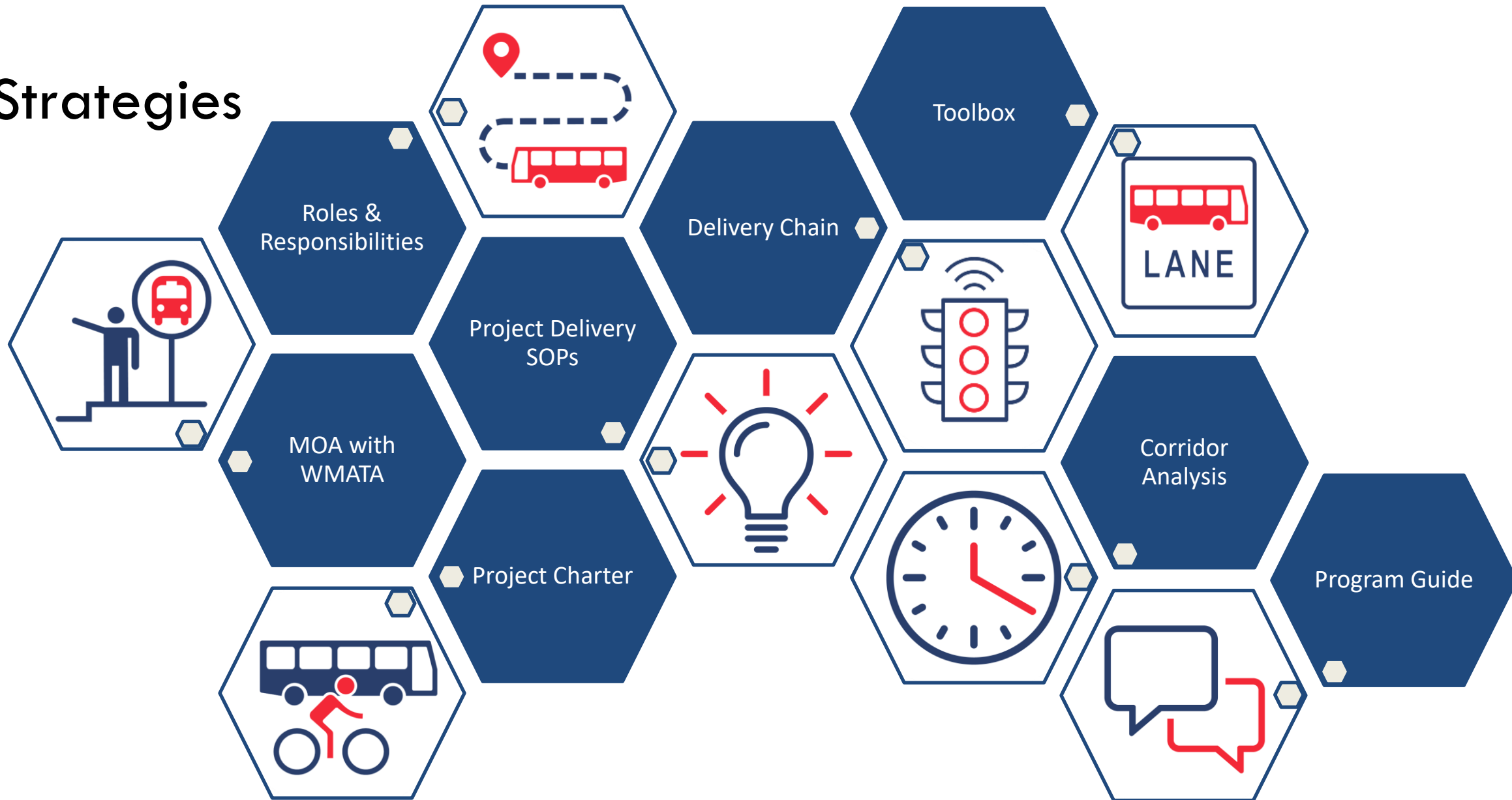


Bus Priority Plan

- Released in December 2021
- Outlines DDOT's vision for bus priority and the importance of transit to District residents, workers, and visitors
- Provides an overview of the bus priority corridor network and project pipeline, which is DDOT's plan for delivery of up to 51 bus priority projects
 - Projects generally delivered in 2-3 years
 - Ramping up to 7-8 projects delivered per year



Strategies



Building Capacity to Deliver

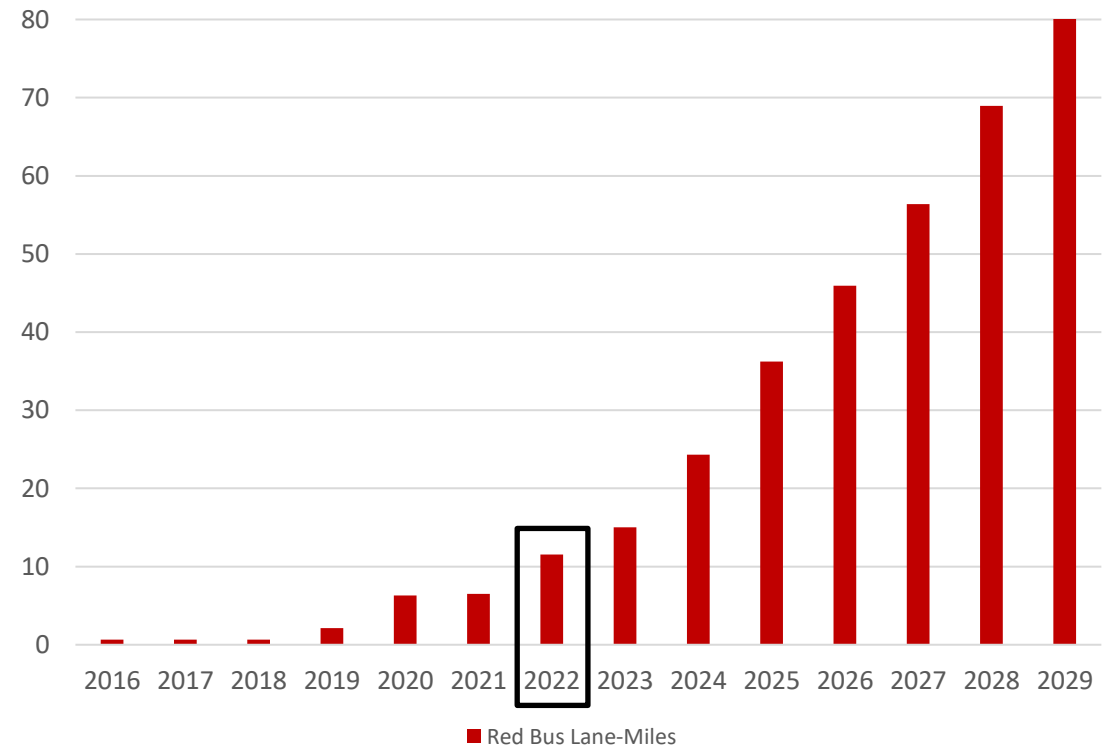


Program Growth

| | Dedicated Staff | Dedicated Funding* (in 6-year CIP) |
|---------|-----------------|------------------------------------|
| FY 2019 | 1 | \$0 |
| FY 2021 | 4 | Approx. \$2.8M |
| FY 2023 | 27 | Approx. \$100M |

*Does not include funding for K Street Transitway or 16th Street NW

Projected Cumulative Constructed Bus Lane Mileage



1 Year After Plan Release

3

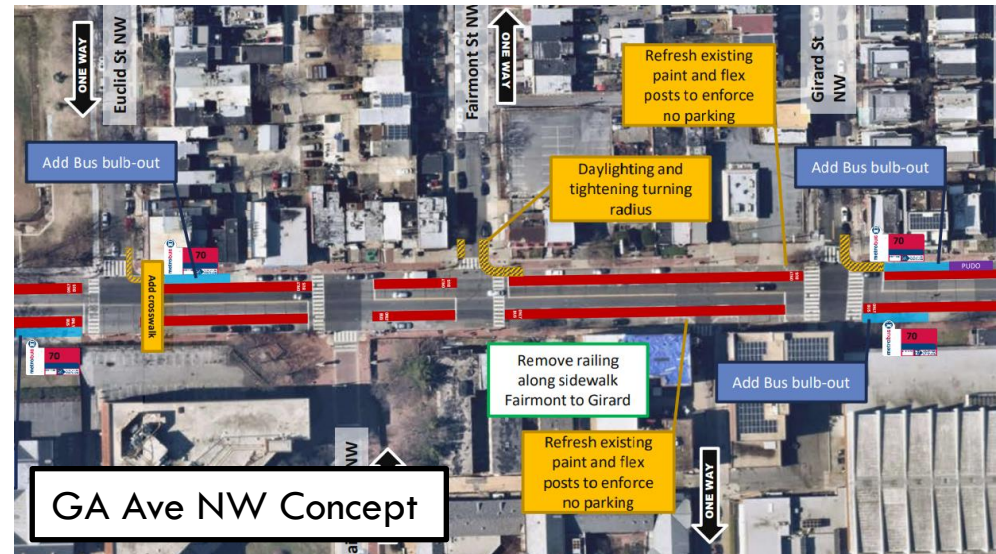
- Projects (of 51) delivered or under construction

18

- Projects in planning or design (5 led by other teams)

5

- Projects to kick off planning in early 2023



Bike & Vision Zero Coordination

Many bus priority corridors overlap with DDOT's bike priority and Vision Zero high-injury networks

Shared Wins

- Include multimodal safety or bike lane improvements as part of bus priority projects

Leveraging Resources

- Incorporate bus priority elements into projects led by other teams



Existing



Proposed



Pennsylvania Avenue SE (led by the DDOT Active Transportation Branch)

- Includes peak-hour peak-direction bus lanes, protected bike lanes, and shared stops

Bike & Vision Zero Coordination

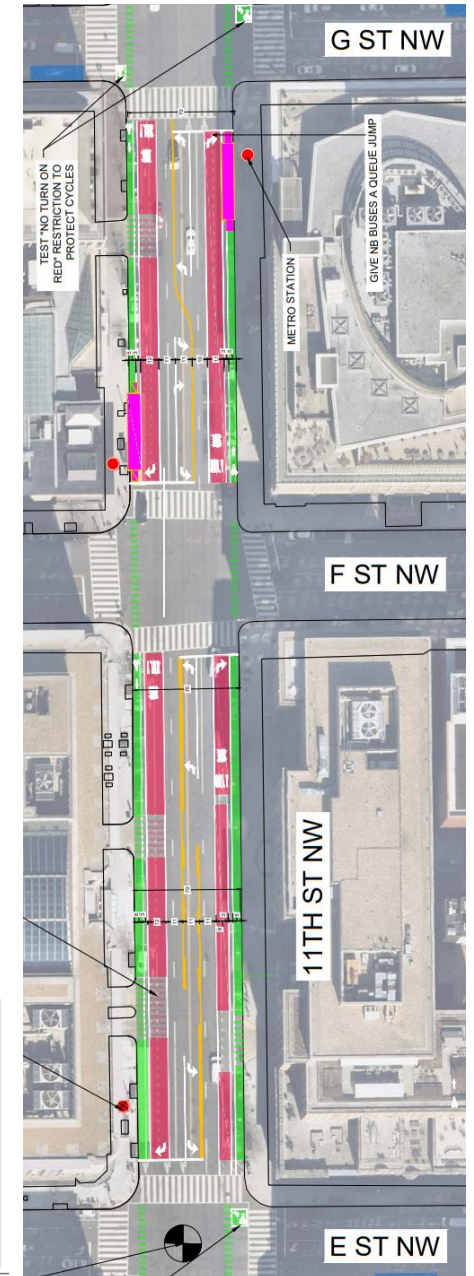
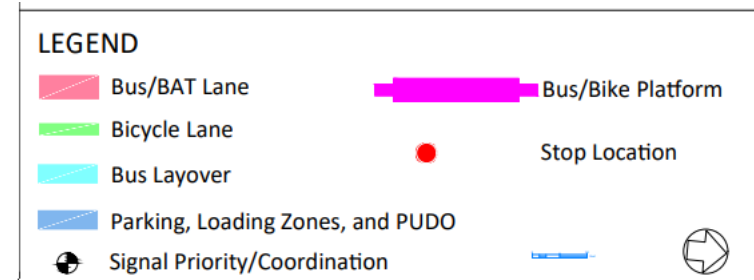
Minnesota Avenue SE

- Goal: implement a safety road diet while maintaining bus speeds and reliability
- Includes protected bike lanes, bus islands/bus bulb-outs, median refuges, intersection reconfigurations for safety, and a future peak-hour bus lane segment



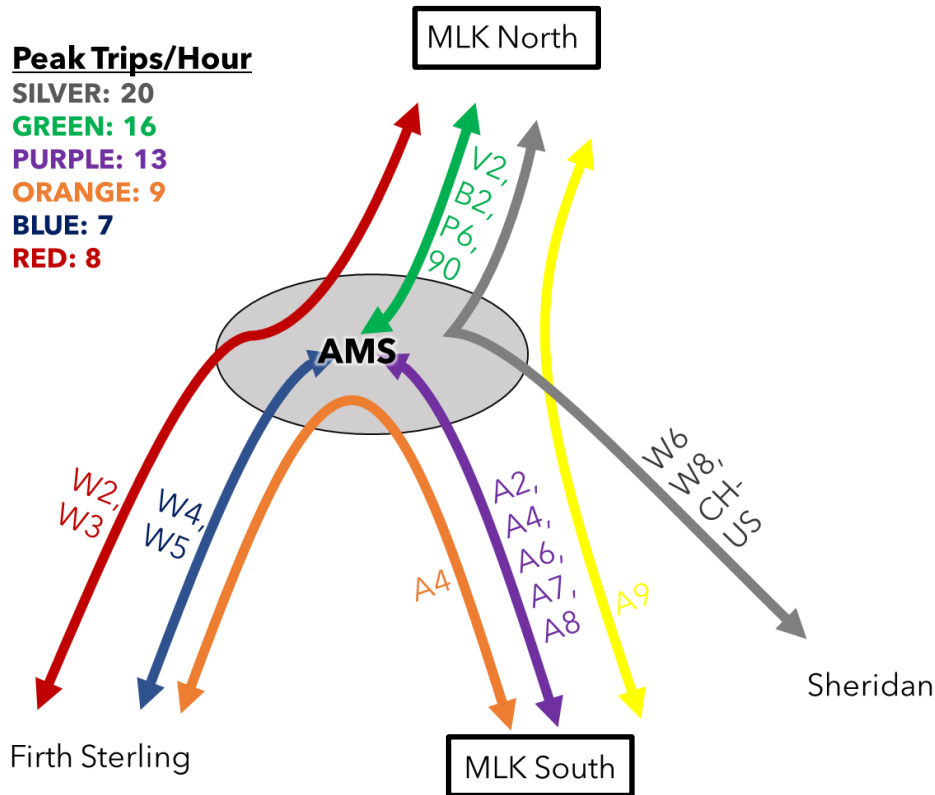
11th Street NW

- Goal: connect buses to the future K Street Transitway and upgrade existing unprotected bike lanes
- Includes full-time bus lanes, protected bike lanes, and bus stop improvements



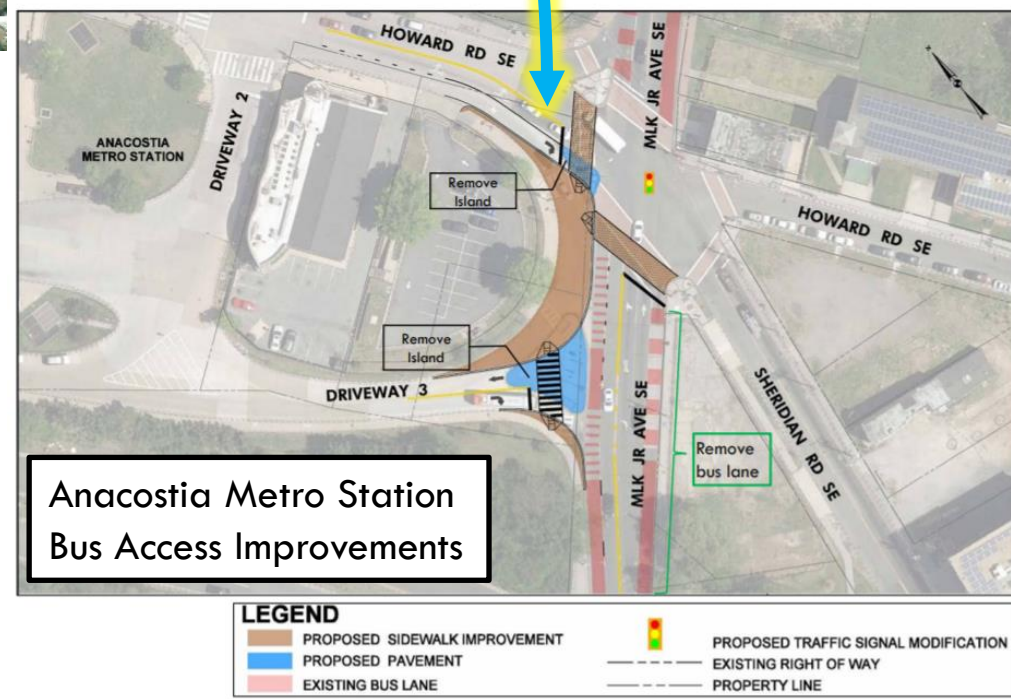
Thinking outside the Curb-to-Curb

The **MLK Jr. Ave SE** project includes reconfiguration of an entrance to the Anacostia Metro Station to improve bus travel times and reliability



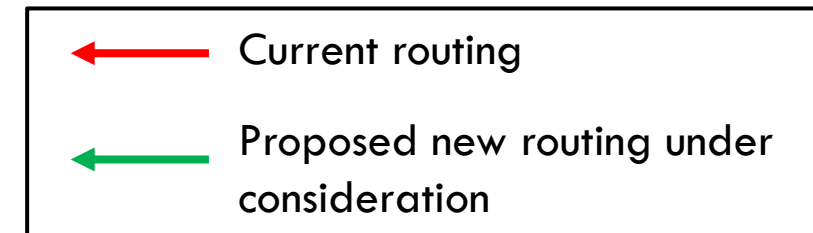
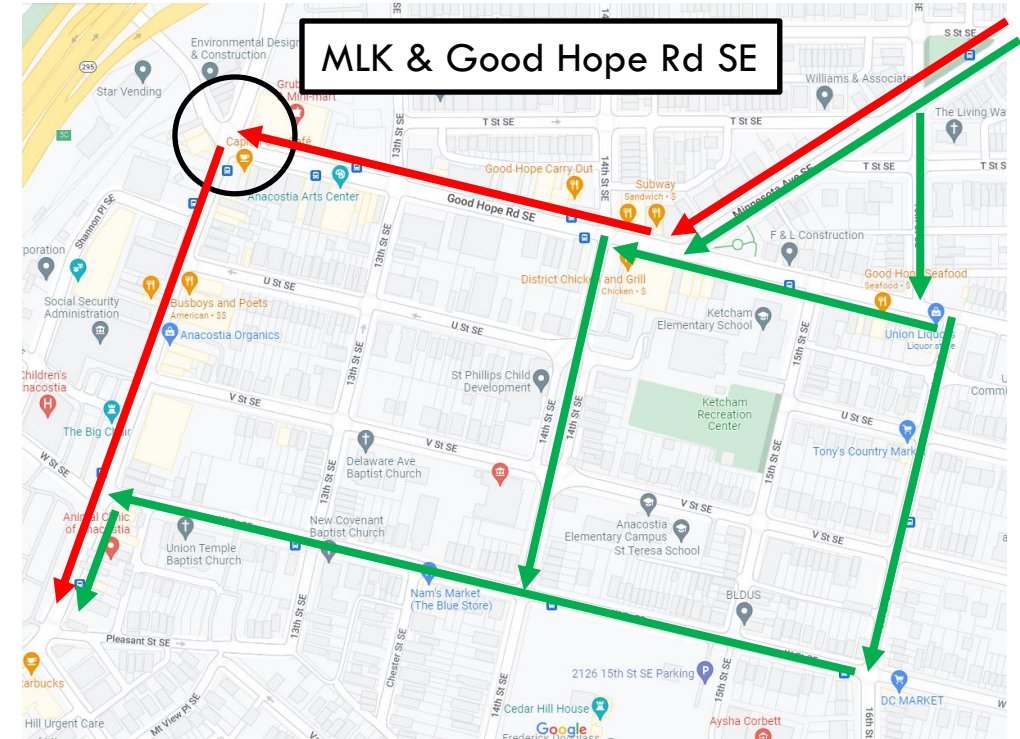
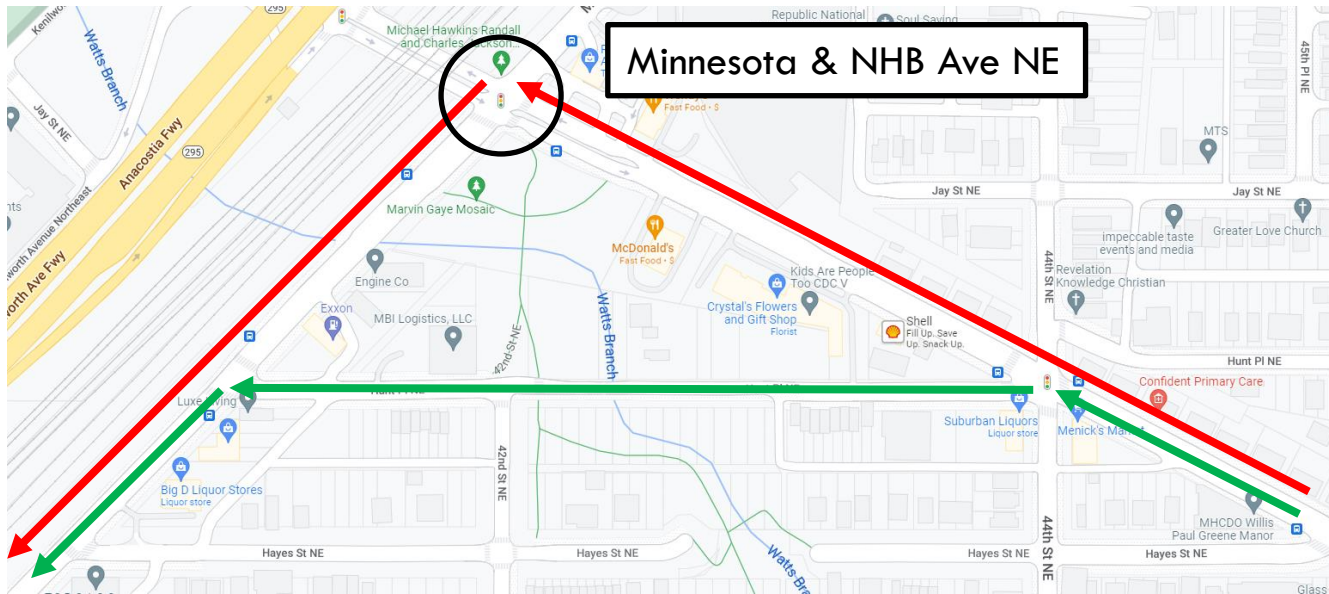
Existing bus lanes on MLK

Image from Greening America's Capitals Report



Thinking outside the Curb-to-Curb

Two projects include proposed bus reroutes to avoid congested & constrained intersections



Thank you!

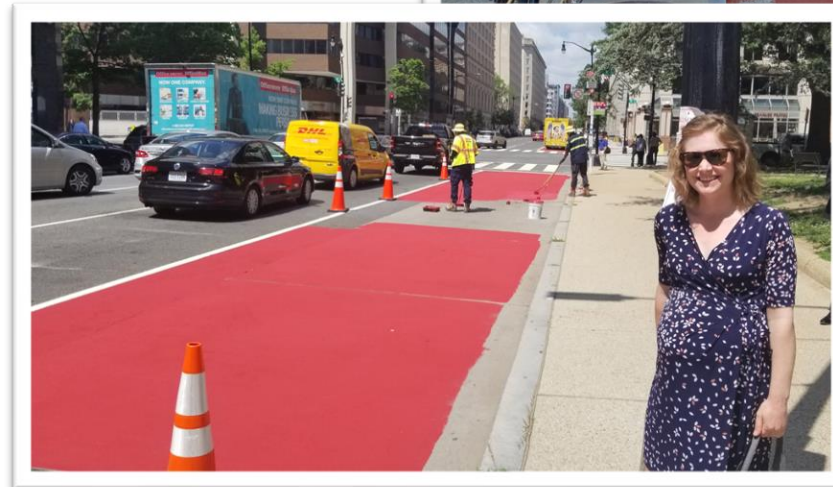
Megan Kanagy, AICP

Mass Transit Branch Manager

Transit Delivery Division

megan.kanagy@dc.gov

buspriority.ddot.dc.gov



ZERO EMISSION BUS (ZEB) REGIONAL INFRASTRUCTURE

WINTER 2023 DRAFT UPDATE

Pierre Gaunard
Transportation Planner

Regional Public Transportation Subcommittee
February 28, 2023 (updated post-meeting, 03/23)



Not Zero Emission Bus Infrastructure...Yet



Image: Demolished diesel fuel tanker at WMATA's Northern Bus Garage (Jordan Pascale/Twitter @jwpcascale)



Background

- COG/TPB staff have previously analyzed regional transit electrification
 - 2019: EV Bus Infrastructure Report (Sulaiman Almaroof, DEP)
 - 2021: Electric Bus Overview (Antonio Castañeda, DTP)
- Today, 10 of 12 D.C. region operators have ZEBs in their fleets, initiated pilot programs, or studied electrification feasibility
- New implementation data to study

Image: New Electric Articulated MetroBus (WMATA/Twitter @wmata)



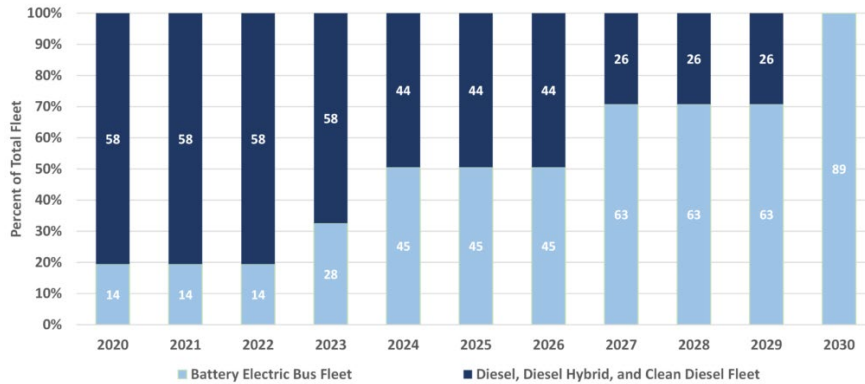
Purpose/Goals

- **Update** data from previous COG/TPB analysis
- **Gather** information about revenue vehicle and charging equipment being used and procured
- **Clarify** a current picture of the state of zero emission bus infrastructure in the Metropolitan Washington region
- **Identify** trends in planning, procurement, and implementation decisions
- **Collaborate** with local partners' efforts to regionally plan for zero emission vehicle adoption (i.e., NVTC, MTA, and WMATA Bus Leaders)
- **Report** results in the 2023 State of Public Transportation Report



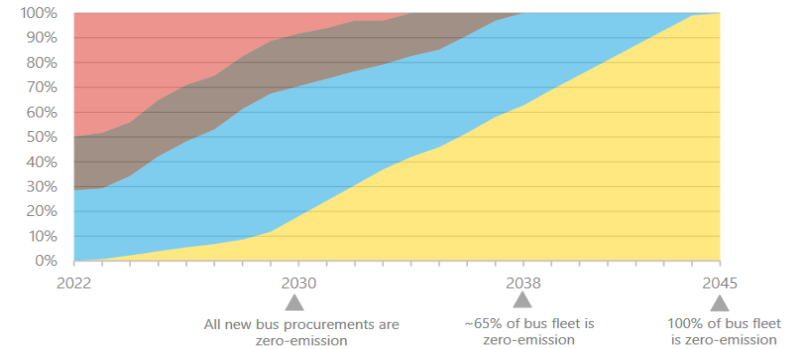
ZEB Procurement Schedule Examples

D.C. Circulator



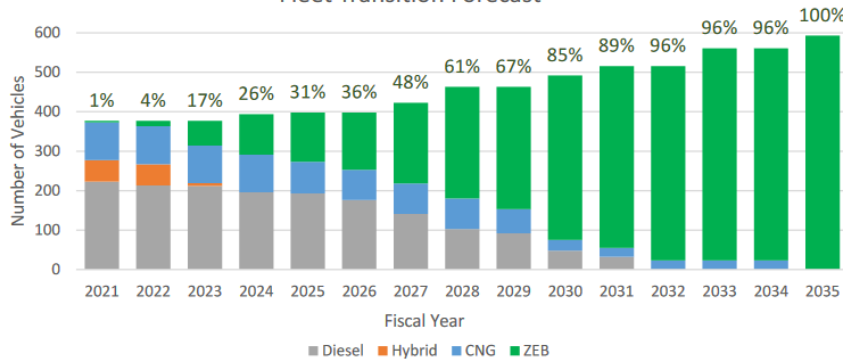
Vehicles as % of Fleet

WMATA

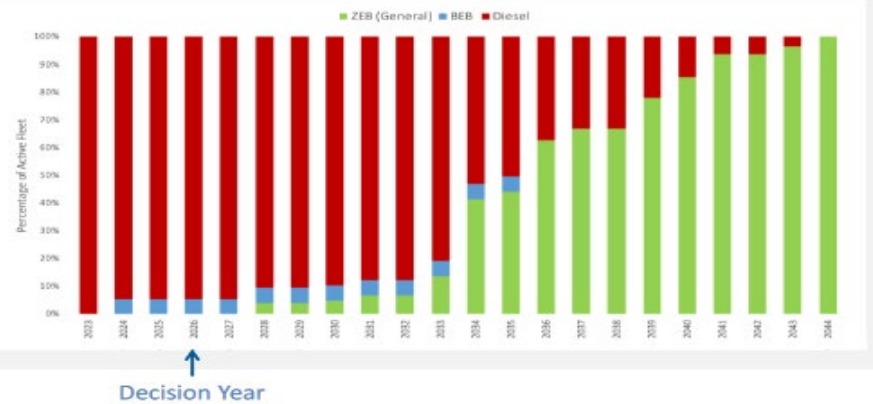


Ride On

Fleet Transition Forecast



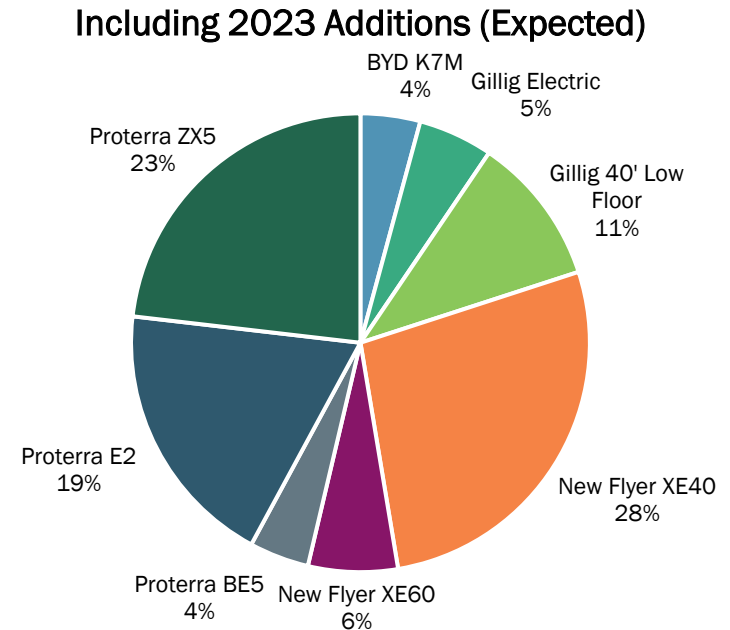
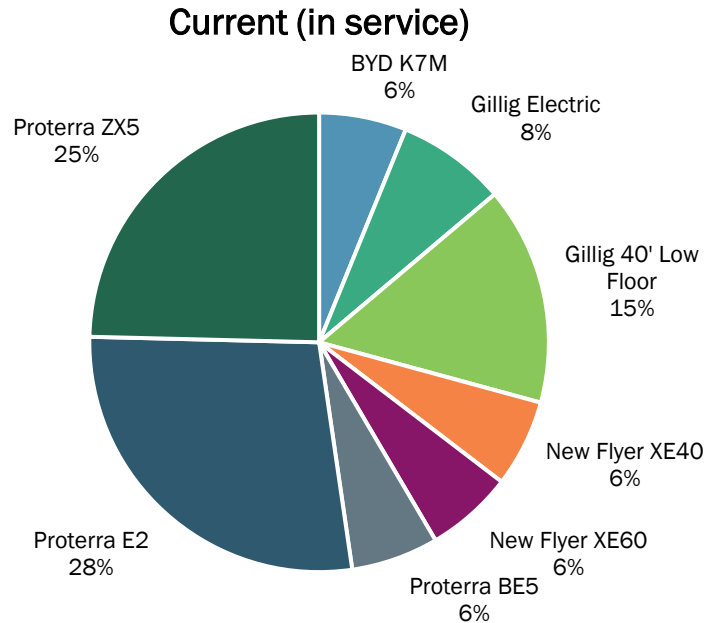
OmniRide



Sources: 2020-2030 Ride On Fleet Management Plan; DC Circulator Zero Emissions Bus Conversion webpage; WMATA December 2021 Fleet Management Plan; OmniRide Zero Emissions Bus Study



ZEB Models in Regional Service

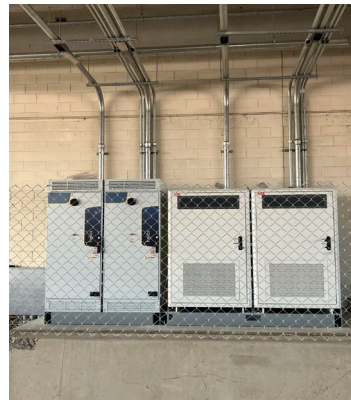


| Manufacturer/Model | Current | (Upcoming)* | Operated By |
|----------------------|---------|-------------|------------------------------------|
| BYD K7M | 4 | 4 | TransIT |
| Gillig Electric | 5 | 5 | TransIT |
| Gillig 40' Low Floor | 10 | 10 | Ride On |
| New Flyer XE40 | 4 | 26 | DASH, (WMATA), (Fairfax Connector) |
| New Flyer XE60 | 4 | 6 | DASH, (WMATA) |
| Proterra BE5 | 4 | 4 | Ride On |
| Proterra E2 | 18 | 18 | DC Circulator, The Bus |
| Proterra ZX5 | 16 | 22 | DASH, (TheBus), DC Circulator |
| | 56 | 76 | |

Sources: Agency websites, transit planning documents, NTD data, news articles; *=does not include The Bus' 2023 procurement



ZEB Charging Infrastructure



| <u>Operator/Agency</u> | <u>Manufacturer/Provider</u> | <u>Year Installed (Appx.)</u> | <u>Charging Capacity</u> | <u>Type</u> |
|------------------------|------------------------------|-------------------------------|--------------------------|-------------|
| Ride On, WMATA | Heliox | 2022, 2023 | >400kW | Pantographs |
| WMATA | Abb | 2023 | >400kW | Pantographs |
| DASH | Abb | 2020 | 150kW | Plug-in |
| The Bus, DASH | Protterra | 2020 | 125kW | Plug-in |
| Ride On | Protterra | 2017 | 60kW | Plug-in |
| D.C. Circulator | Tritium | 2018 | 50kW | Plug-in |
| TransIT | CCW | 2016 | n/a | Plug-in |
| TransIT | BYD | 2019 | n/a | Plug-in |

Sources: Agency websites, transit planning documents, press releases, and news articles

Images: D.C. Circulator/Zero Emissions Fleet Conversion webpage; WMATA/Twitter, @wmata; DASH/Zero Emissions Bus Program Presentation



Identified Early Trends



Image: TRANSIT Bus Charging (TRANSIT Services of Frederick County/Facebook)

- Regional ZEB operators can serve most of their existing routes using battery-electric buses
 - Infrastructure interventions can mitigate some weather-related issues
- In-ground charging units are increasingly 125 kW capacity or higher (with two or three dispensers per unit)
- There's more enthusiasm to incorporate ZEBs into fleets, but agencies are still doing more independently than collectively



How Can TPB Help?

Examples of how we can serve your zero emission transition needs:

- Conduct a regional study of potential on-street charging locations
- Offer other technical assistance (ex., conduct an internal or contractor-staffed study on X electrification issue)
- Coordinate joint procurement process or workforce development programs
- Serve as a region-wide depository for zero emission transit data
- Facilitate full regional scale meetings on operator electrification efforts
- Funding assistance?

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National Capital Region
Transportation Planning Board



MEMORANDUM

TO: Regional Public Transportation Subcommittee (RPTS)
FROM: Tim Canan, Planning Data & Research Program Director
Charlene Howard, Manager, Planning Data Resources
SUBJECT: High-Capacity Transit Map project update
DATE: February 28, 2023

The memo provides an update on the project to develop a regional high-capacity transit (HCT) map that is mode specific and operator neutral for the TPB Planning Region. TPB's definition of HCT includes Metrorail, commuter rail, light rail, streetcar, and bus rapid transit. The first four of the modes listed are readily understood without detailed description, however, what constitutes bus rapid transit (BRT) is more elusive. In TPB's 2022 update of its long-range transportation plan, Visualize 2045, BRT is described as follows:

“Bus rapid transit, or BRT, is an enhanced, high-frequency service that makes use of transitways and brings together other enhancements that can move more people faster and more reliably than traditional bus services.”¹

Staff plans to use the above definition as a starting point for defining what constitutes BRT for purposes of what will be included on the HCT Map product. How BRT is, and will be, implemented throughout the region varies widely, from including numerous features such as dedicated lanes, off-board fare collection, platform-level boarding, and intersection signal prioritization to perhaps including only signal prioritization for conventional buses running on unrestricted travel lanes. As a result, staff would like to engage this Subcommittee to obtain input on refining the BRT definition, which then could be applied to identify what BRT projects will be included in the HCT map.

At its March meeting, the Subcommittee will be asked to discuss and provide input on what will constitute BRT for purposes of this project. In advance of the March meeting, members are asked to review the information provided in this memo and evaluate the current working definition of BRT against any existing or planned BRT projects in your jurisdictions.

Thank you for your cooperation; we look forward to discussing this issue with you next month.

¹ <https://visualize2045.org/wp-content/uploads/2022/12/Visualize-2045-update-Chapter-6.pdf>