

Better Bus Work Session

Transportation Planning Board

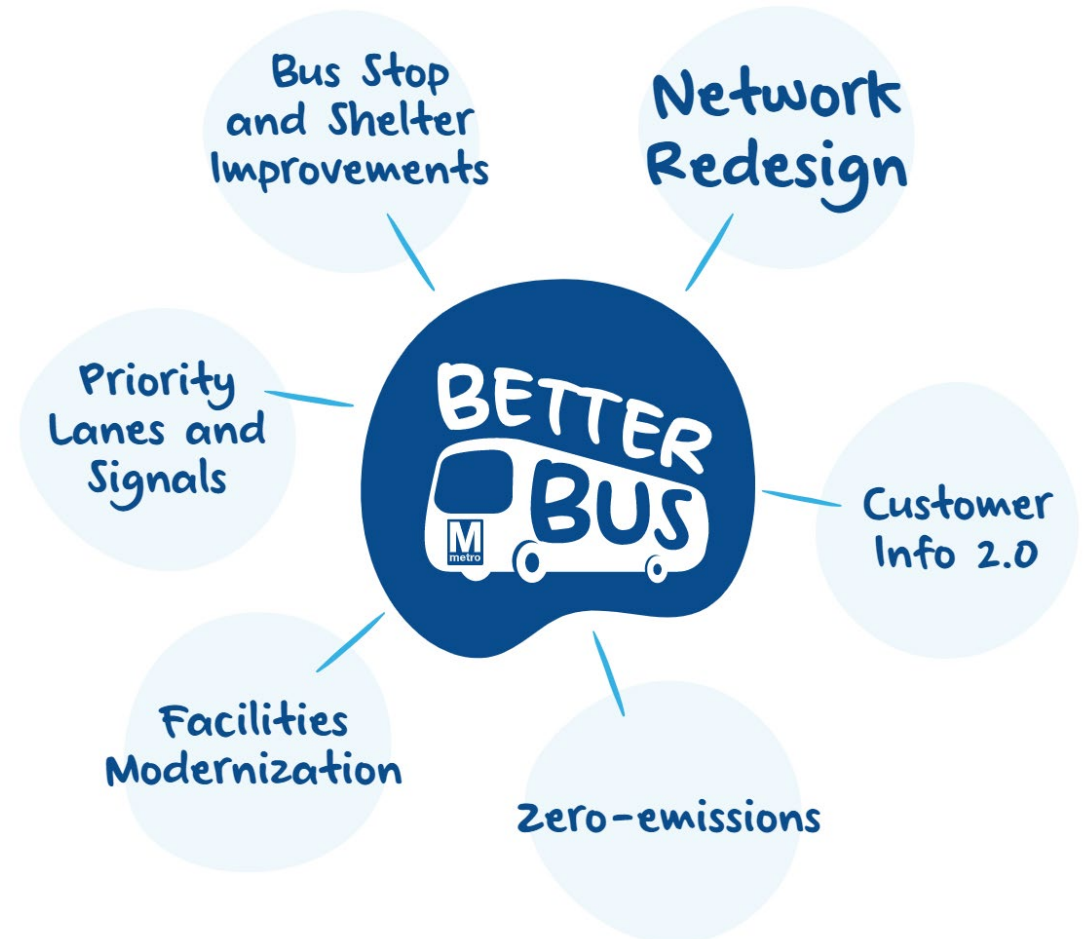
April 19, 2023





Purpose

- Build on the November 2022 TPB Better Bus Briefing
- Hold Work Session with TPB Members on opportunities to make buses better in the region:
 - Bus Priority
 - Bus Stops
 - Zero Emission Buses



A Great Bus System Provides...



**Connections to
key destinations**



**Access to
opportunity**



**Legible, intuitive,
coordinated,
and accessible
information**



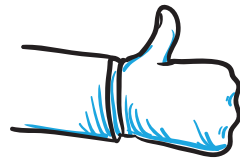
**Bus stops with
shelters, seating,
lighting, and
accurate real-
time info**



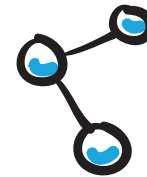
**Transit priority
and enforced,
dedicated lanes**



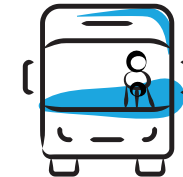
**Service all day/
all week**



**Exceptional
customer
experience**



**Seamless transfers
and connections to
other modes**



**Clean, comfortable,
safe vehicles**



TPB Better Bus Work Session: Opportunities

- Studies and technical assistance
- Developing, adopting, and implementing regional guidelines and standards
- Pursuing federal grant applications regionally or sub-regionally
- Prioritizing funding in STIP
- Others?



Increasing Reliability of Bus Service: Bus Priority

Need for Bus Priority

Traffic congestion and reduced speeds impact Metrobus ridership

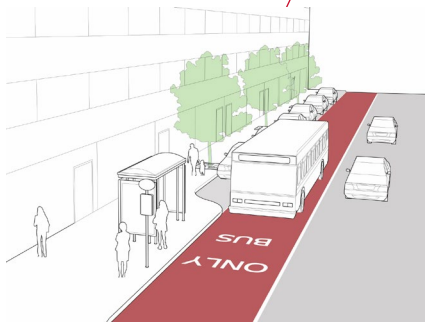
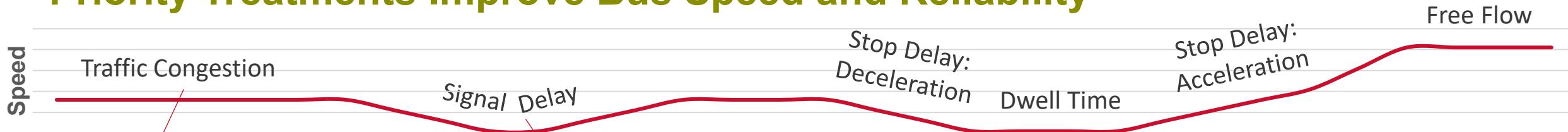


Average bus speed in DC is **9.8 MPH**.
That's a **9 percent decline** over 15 years.

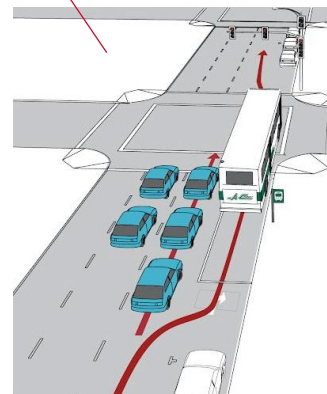


Metrobus CY 2022, Q4 Customer Survey
One in four riders have switched to another mode **because** other modes of transportation are faster and more reliable.

Priority Treatments Improve Bus Speed and Reliability



1. Dedicated Bus Lanes
2. Clear Lanes Program



3. Transit Signal Priority
4. Queue Jumps

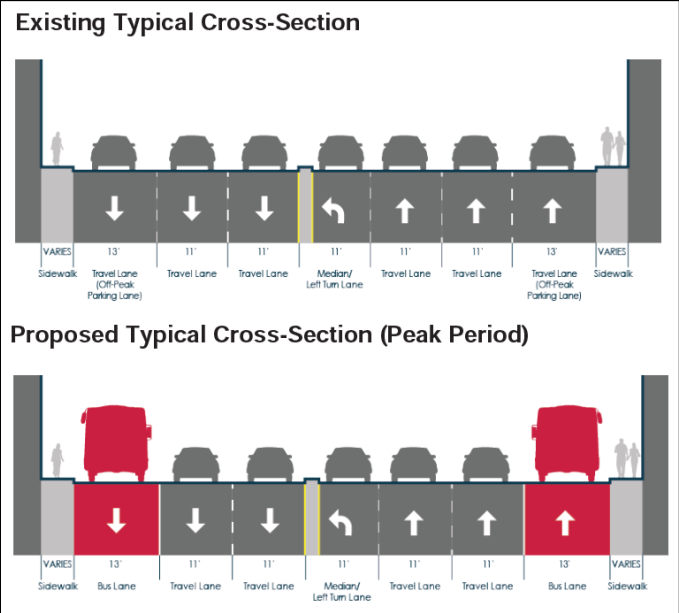
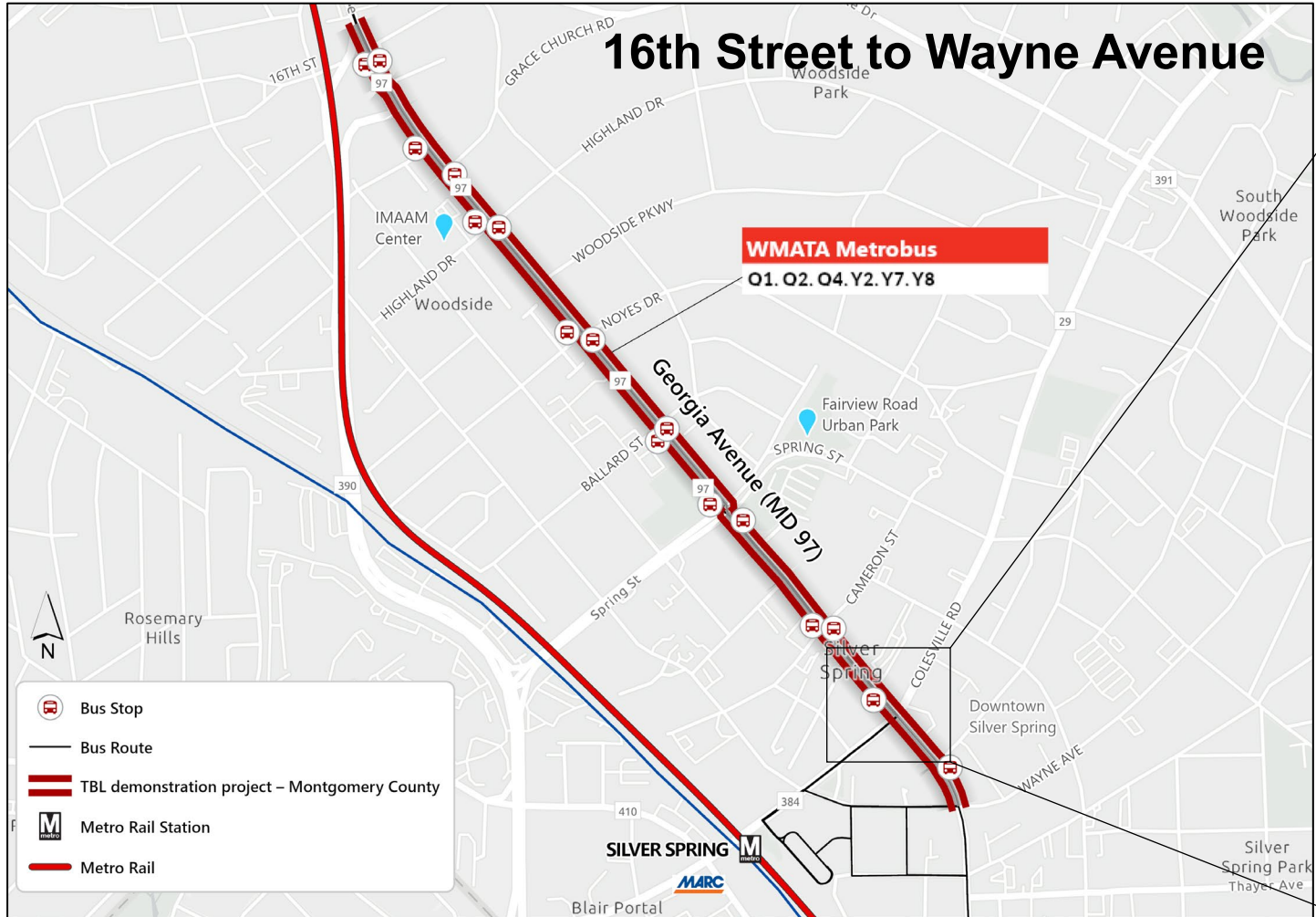


5. All-Door Boarding
 - Bus Islands
 - Stop Consolidation



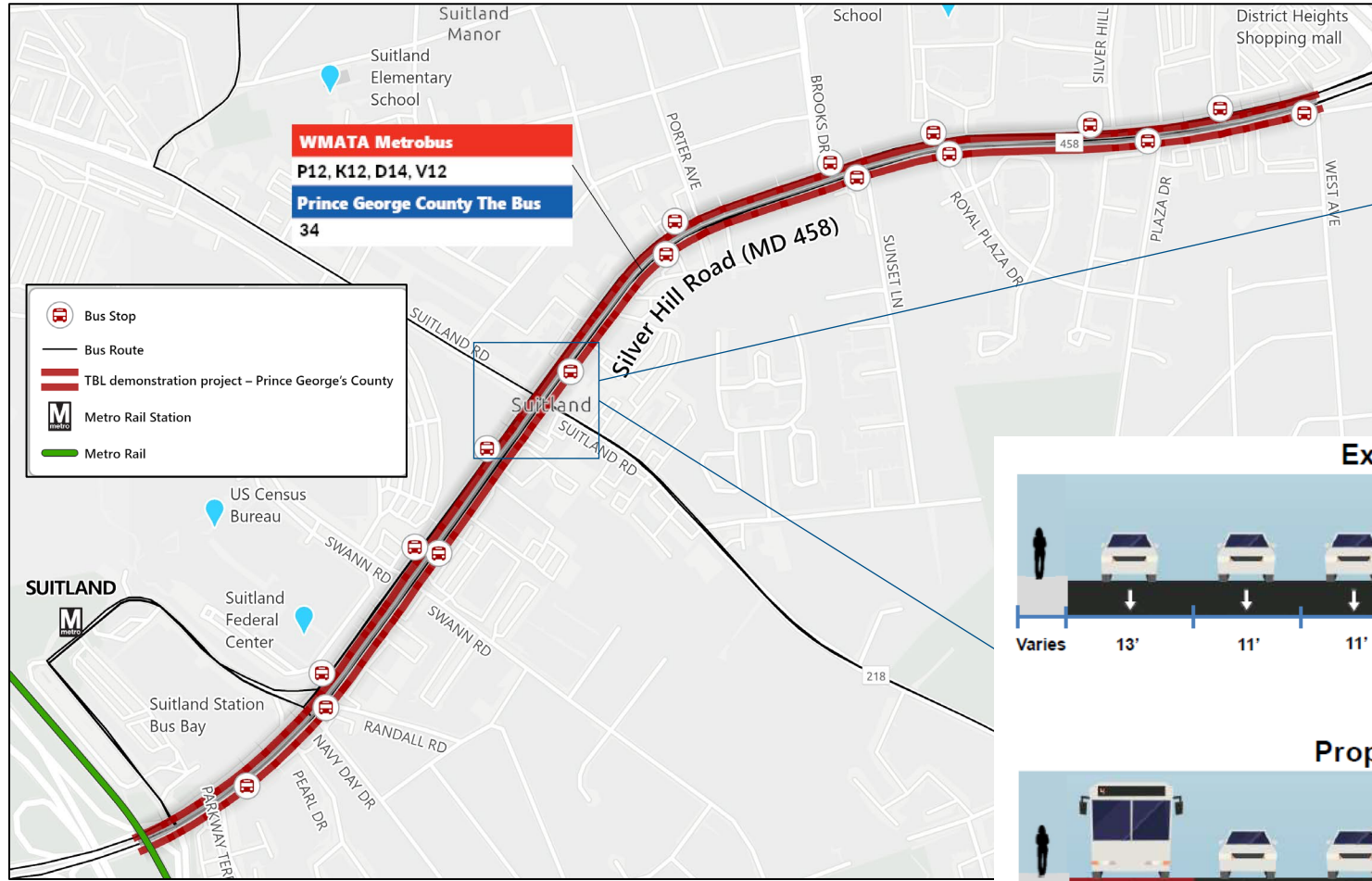
Bus Priority Projects

Tactical Bus Lanes on Georgia Avenue in Montgomery County

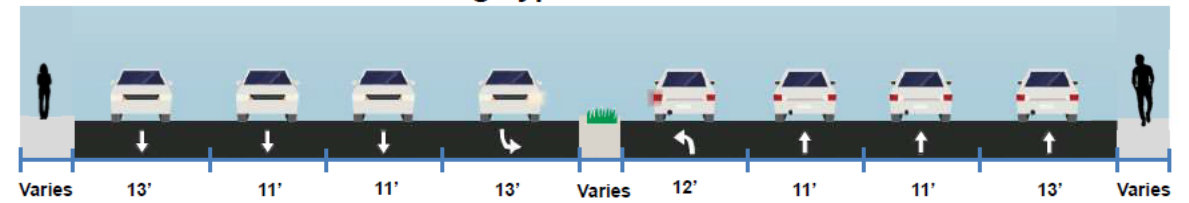


Bus Priority Projects

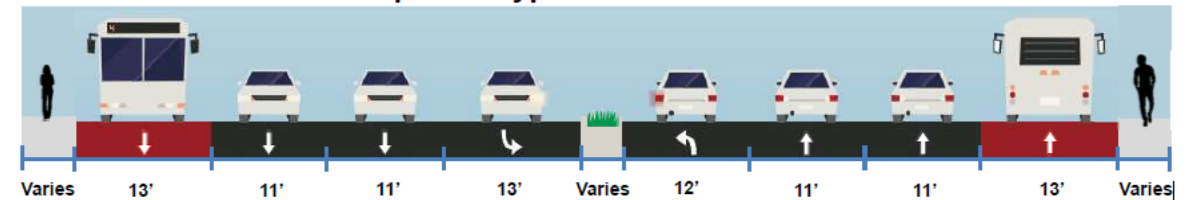
Tactical Bus Lanes on Silver Hill Road in Prince George's County



Existing Typical Cross-Section



Proposed Typical Cross-Section





RAISE GRANT APPLICATION: Merit Criteria



Economic Competitiveness & Opportunity

- Total time travel savings of 137,913 Person-hours along both corridors
- \$1 million in discounted travel time savings

Mobility & Community Connectivity

- \$0.3 million of discounted active transportation benefit



State of Good Repair

- Concurrent maintenance schedule by full roadway re-pavement

Quality of Life

- 23 bus shelters constructed
- 33 crosswalks created



Innovation

- Dedicated bus lanes, transit signal priority, and queue jumps for improved safety and reliability

Safety

- 433 crash incidents reduced
- NPV crash savings of \$34.6 million



Partnership & Collaboration

- Pioneering co-sponsorship and partnership of WMATA with MDOT

Environmental Sustainability

- 17 metric tons of CO2 emissions reduced
- Fuel Consumption down by 16,224 gallons



Bus Priority Projects

Clear Lanes

Bus lanes are meant to speed buses up **BUT** unauthorized vehicles in bus lanes and bus stops slow buses down.



Source: Dan Malouff

Peer cities have improved bus performance with Automated Lane Enforcement

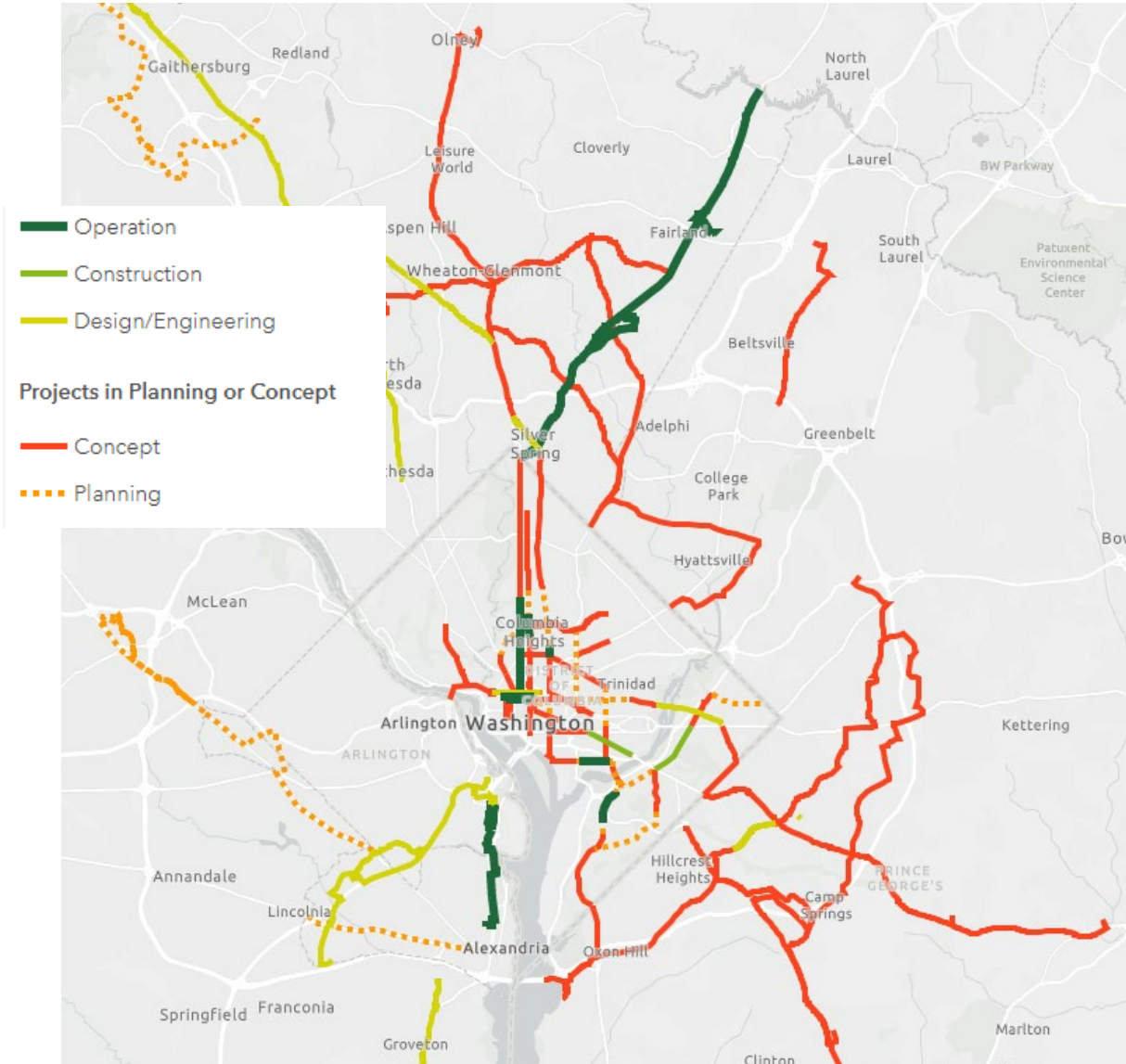
- New York City: Automatic Bus Lane Enforcement (ABLE) increased bus speeds 7 to 31 percent.
- San Francisco: Transit Only Lane Enforcement (TOLE) program reduced afternoon delay 7 to 20 percent.

Metro is partnering with DC to begin automated enforcement of bus lanes and bus stop parking violations later this year

- Metrobuses will be equipped with cameras to detect and record vehicles blocking bus lanes or bus stops
- Warnings or tickets will be issued by the District of Columbia

How can TPB and members help?

Bus Priority/BRT in our Region in 2023



- Advocate for longer, continuous segments for bus priority across jurisdictional boundaries
- Establish regional minimums for bus lanes for consistency, e.g., red paint, peak period in both directions, and standardize signage and markings for bus lanes
- Advocate for automated camera enforcement of bus priority in MD and VA
- Identify opportunities for shared procurement

How Many People Can Move in Cars Versus a Bus Lane



Source: Based on typical capacities for vehicles and buses traveling in different types of travel lanes.¹⁴

Source: TransLink Bus Speed and Reliability Report 2023





Improving Facilities for Customers: Bus Stops

What is the problem?

- Bus Stop Concerns
 - Many stops do not have shelter or seating available for waiting passengers
- Challenges
 - Lack of seating creates accessibility issue
 - Customer impact on experience
 - Possible equity issue



What is Metro doing?

- Obtaining feedback from customers
- Bus Stop Shelter Program
 - Benefits 66K+ riders weekly
 - \$2M allocated for 75 temporary shelters
 - \$175-\$200M estimated for 262 permanent shelters
- Actively working with Regional Partners to pilot seating options
 - Identifying funding for pilot
 - Ensuring equity for pilot launch



How can TPB and/or TPB members assist?

- Develop bus stop standards that provides a defined level of :
 - Cover
 - Seating
 - Information
- Adopt and implement the defined bus stop standards
- Promote the standards
- DOT's streamline process for seating pilot installation
- Offer support in identifying funding system-wide





Helping the Region Meet Its Climate Change Goals: Zero-Emission Buses



What is the initiative?

- **Initiative:** Metro committed to transition to 100% zero-emission bus fleet by 2045
- **Challenges:**
 - Constructing and installing charging infrastructure and equipment at 9 bus garages
 - Grid upgrades by three different energy providers
 - Transitioning nearly 1,600 buses
 - Funding
 - Training for new technology
 - Continuing to assess the state of evolving technology



Metro's current battery-electric bus

What is Metro doing?

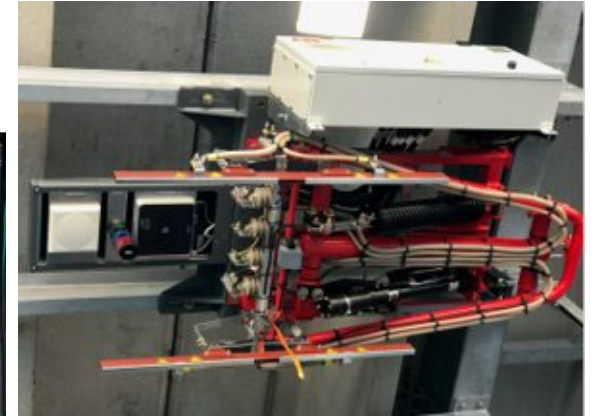
- Planning and designing Northern, Bladensburg, Western, Cinder Bed Road garages to support ZEBs
- Phase 1 of zero-emission bus deployment will include 12 battery-electric buses, overhead pantograph charging at Shepherd Parkway garage
- Developed ZEB Transition Plan
- Launched ZEB Regional Coordination group



Northern Bus Garage Groundbreaking

How can TPB and/or TPB members assist?

- Support needs identified by ZEB Regional Coordination group
- Examples may include:
 - Funding needs and opportunities
 - Energy needs and utility rates/programs
 - Resilience options
 - Procurement coordination
 - Workforce development and training
 - Safety training and protocols
 - En-route charging and other shared capital needs



Charger cabinets and pantographs installed at Shepherd Parkway