DUKE STREET 7N MOTION

Advisory Group Meeting #7

December 15, 2022



alexandriava.gov/DukeInMotion

This project is funded with Northern Virginia Transportation Authority (NVTA) regional revenues.





Welcome!



Introductions & Meeting Background

Segment 1 Approach



Segment 2

- Recap and Transitions
- Public Comment Period on Segment 2
- Discussion and direction to project team



Station Spacing

Next Steps



Approval of Meeting Minutes #6

General Public Comment

AG Roles and Responsibilities

- ✓ Relay information
- ✓ Participate
- ✓ Provide feedback
- ✓ Respect each other
- ✓ Represent groups
- ✓ Build on decisions





Project Guiding Principles



Convenient

Make bus travel more predictable, frequent, and comfortable



Efficient

Improve mobility for all Duke Street travelers



Equitable

Use enhanced bus transit to support equitable access for a diversity of people and places



Safe

Ensure safety and accessibility for those connecting to and riding the bus, as well as other travelers



Vibrant

Create and enhance thriving and future corridor destinations that improve resident quality of life and boost the local economy



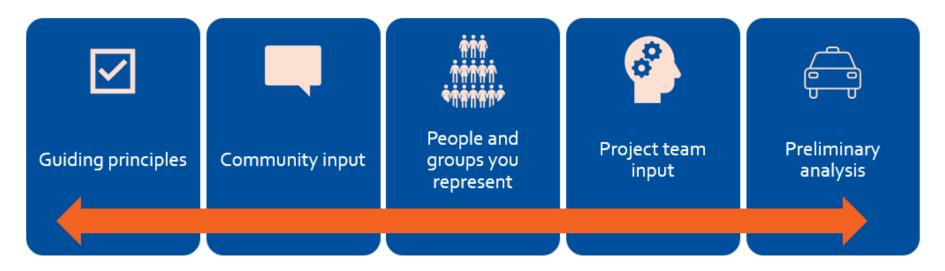
Sustainable

Contribute positively to the environment, now and in the future

Meeting Goals

- Identify two near-term alternatives for Segment 1 and Segment 2 for further design and analysis
- Provide input on the general framework for station spacing

CONSIDERATIONS





Alternatives to Advance

AG Voted to Advance



- Segment 1 (Ripley to Jordan):
 Center Running
- Segment 3 (Roth to King Street Metro):
 Center & Curb Running

Staff Recommendation



Advance two options for further design and analysis for each segment



Segment 2 Considerations

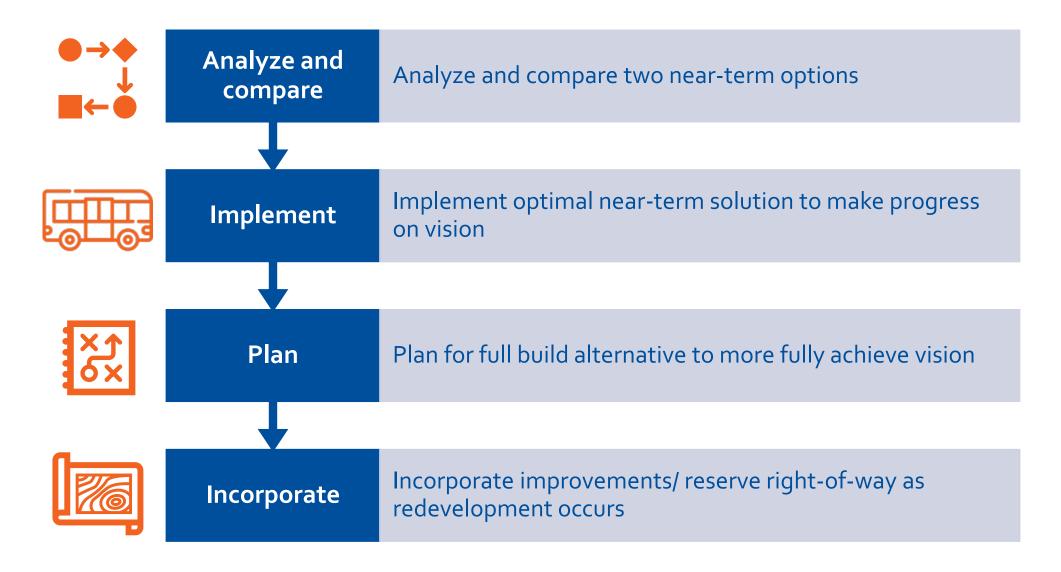
Public input: Resident concern in losing the safety buffer provided by residential service roads (2A)

Available space:
Significant physical constraints

Transit Need: Delay is currently minimal in 2A, but high in 2B

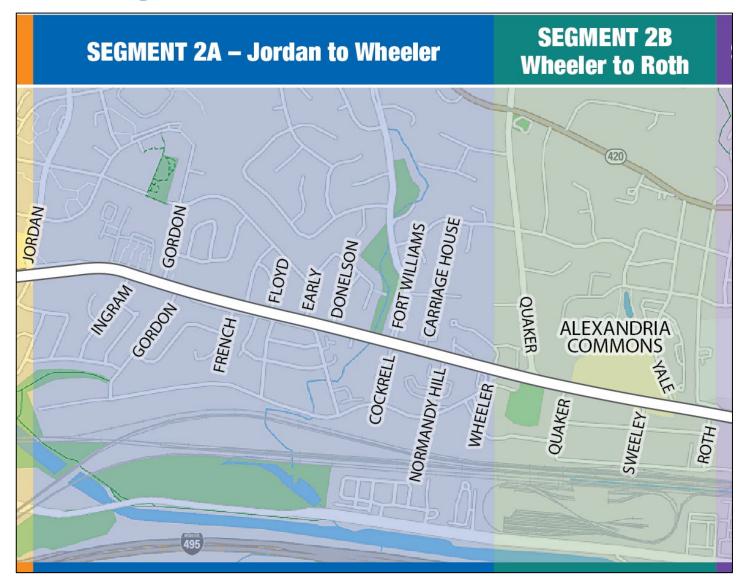
Opportunity: More potential for redevelopment in 2B

Potential for Phased Approach





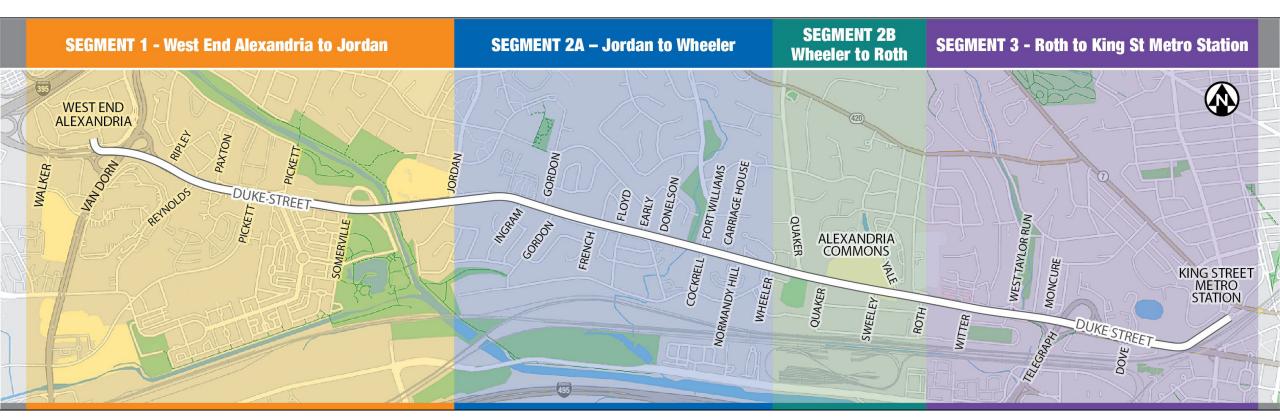
Segment 2: Jordan Street to Roth Street







Corridor Alternatives



Segment 1

- Center running
- Curb running
- Mixed traffic

Segment 2A

- Center running
- Hybrid
- Mixed traffic

Segment 2B

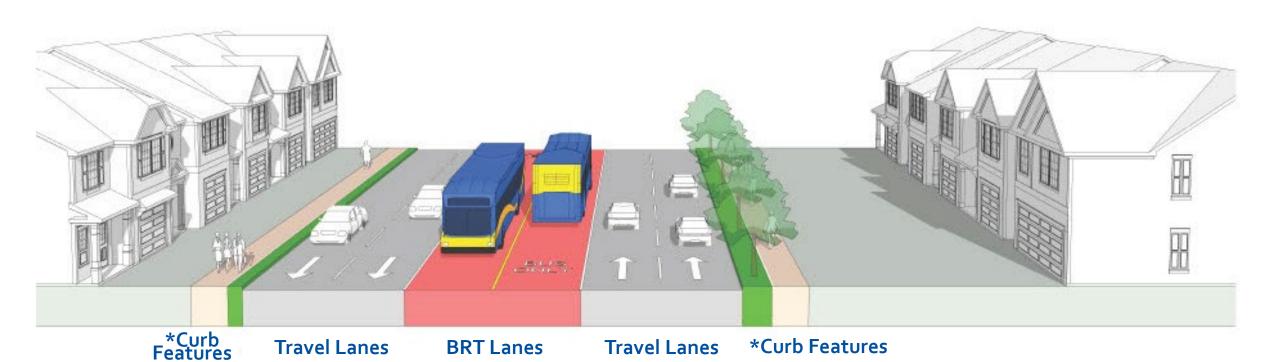
- Center running
- Bidirectional
- Mixed traffic

Segment 3

- Center running
- Curb running
- Mixed traffic



Segment 2B: Center Running

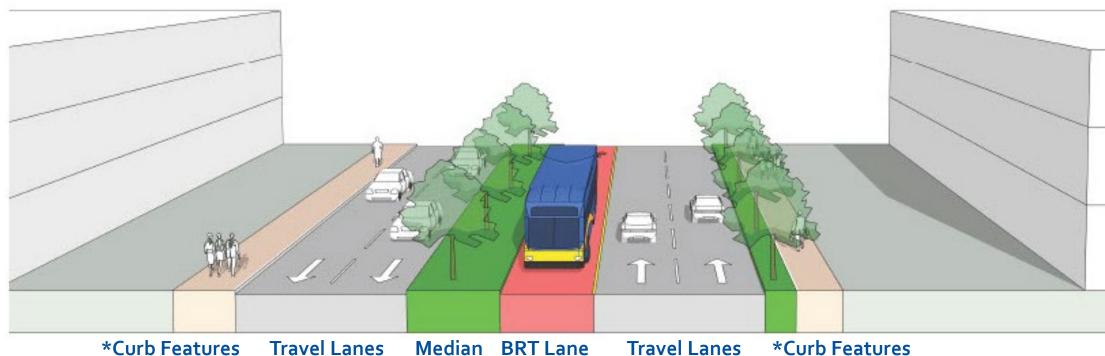


Best bus reliability, speed, and rider experience
 Separates bus and general traffic
 Shorter crossings to bus
 Increased area for trees, streetscaping, stormwater management
 Trade Offs
 Widening required
 Potential for partial acquisitions of property
 Left turns only allowed at traffic signals and some are eliminated

*Curb features to be determined at a later stage in the project.



Segment 2B: Bidirectional



В	enefits	Trade Offs
•	Improved bus reliability, speed, and rider experience Separates bus from general traffic Shorter crossings to bus stations Increased area for trees, streetscaping, stormwater management	 Widening required Potential for partial acquisitions of property Left turns only allowed at traffic signals and some are eliminated Reduced bus efficiency

*Curb features to be determined at a later stage in the project.



Segment 2B: Bidirectional



LEGEND

BRT Station

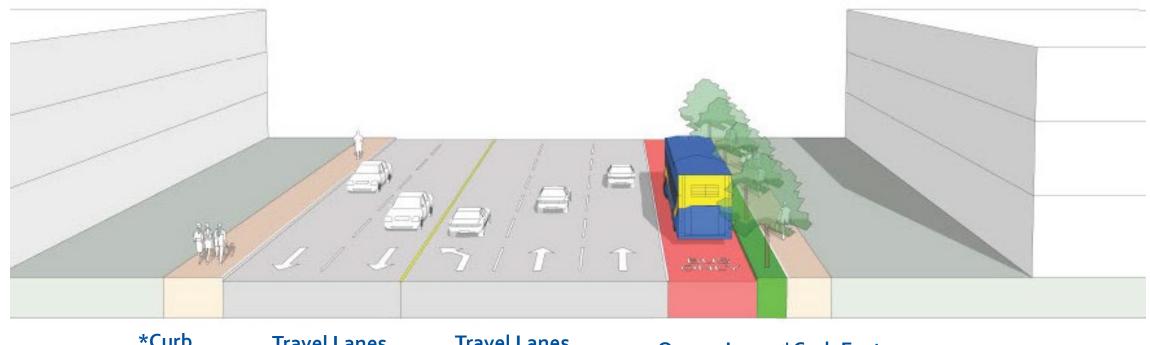
Bus-only Lanes and Holding Area

Landscaping/Buffer

Curb Features*

*Curb features to be determined at a later stage in the project.

Segment 2B: Mixed Traffic



*Curb **Features**

Travel Lanes

Travel Lanes

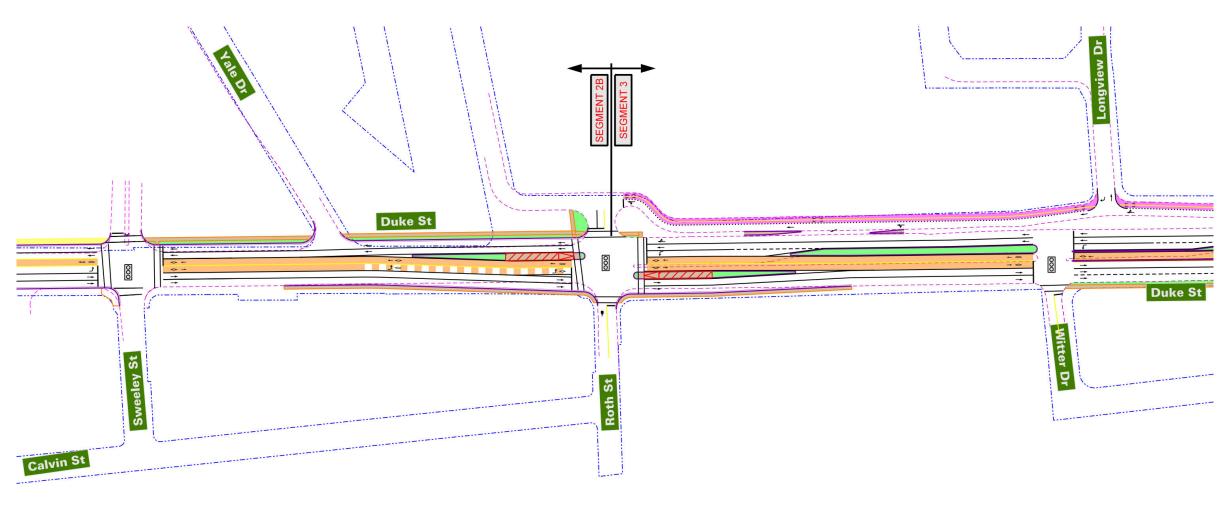
Queue Jump *Curb Features

Benefits	Trade Offs
 Minimally improved bus reliability and rider experience from transit signal priority and queue jumps Spot improvements for vehicle safety 	 Limited/reduced improvement to bus operation and reliability Limited improvements to vehicle safety

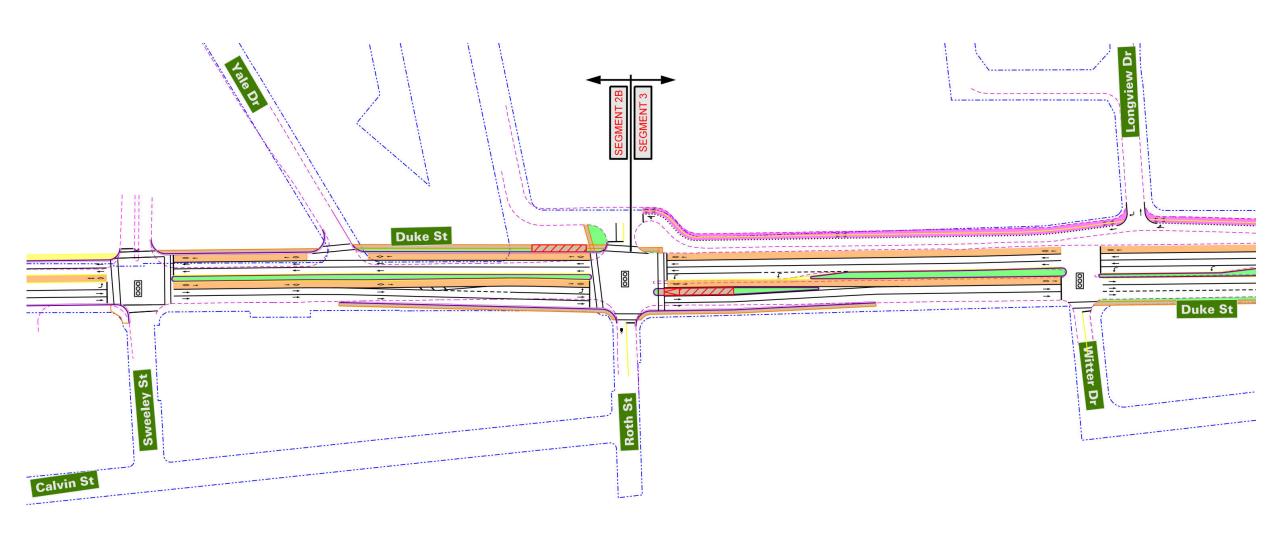
*Curb features to be determined at a later stage in the project.

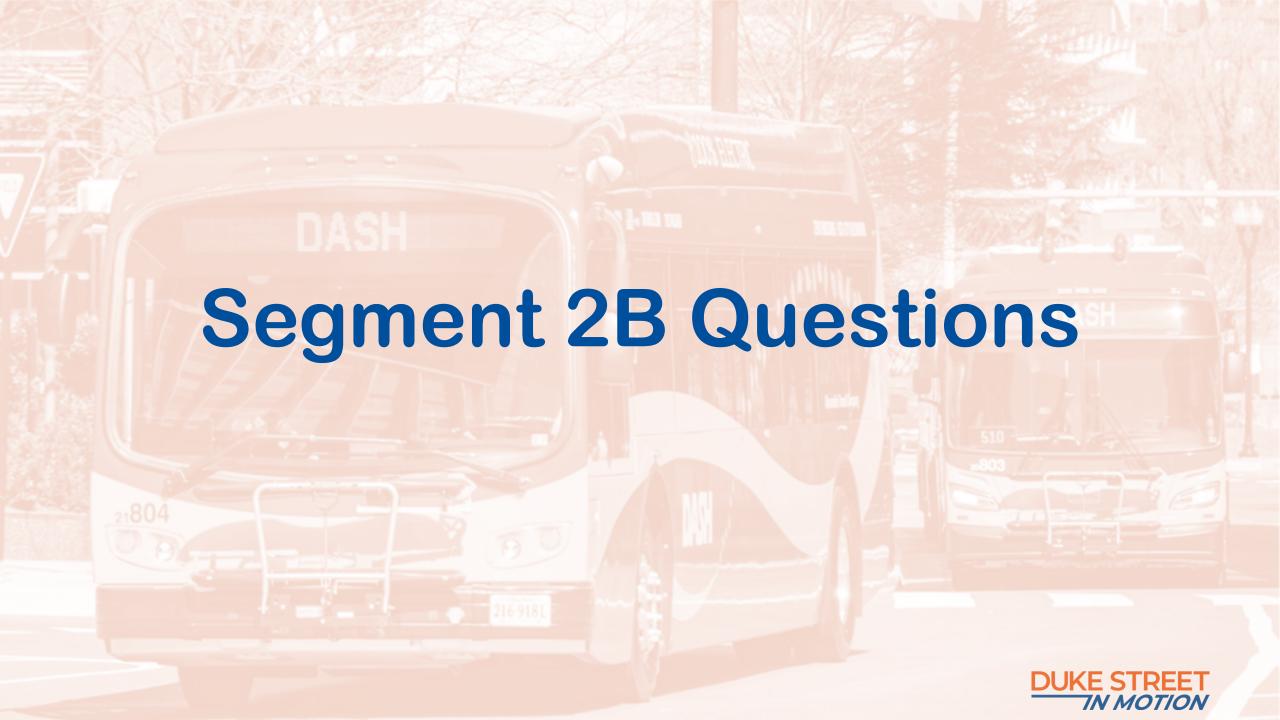


Segment 2B Bidirectional Transition to Segment 3 Center Running



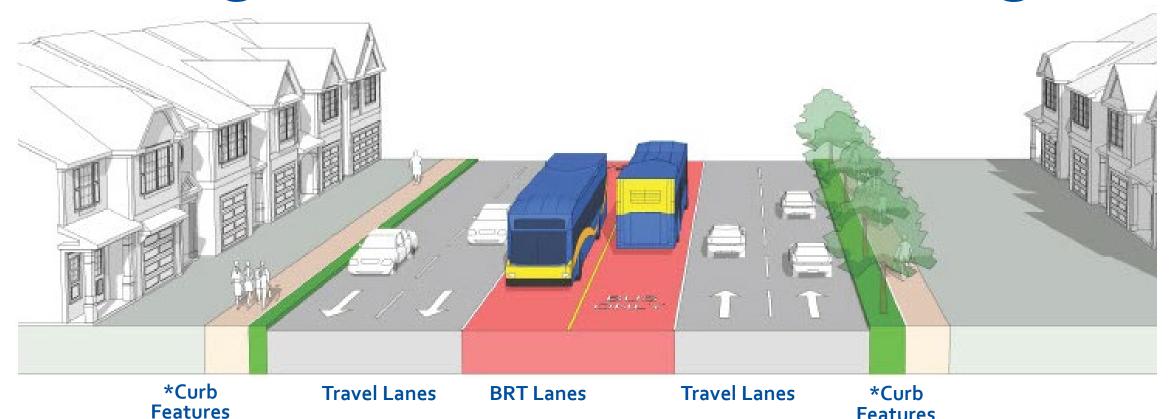
Segment 2B Bidirectional Transition to Segment 3 Curb Running







Segment 2A: Center Running



Benefits Trade Offs Best bus reliability, speed, and rider Widening impacts service roads and related access/parking experience Potential for partial acquisitions of property Separates bus and general traffic Shorter crossings to bus Left turns only allowed at traffic signals

*Curb features to be determined at a later stage in the project.

Features



Segment 2A: Hybrid



Benefits	Trade Offs
 Improved bus reliability, speed, and rider experience Separates bus and general traffic in some locations Shorter crossings to bus in some sections 	 Widening impacts commercial service roads Some left turn impacts Reduced bus efficiency



Segment 2A: Hybrid Service Roads

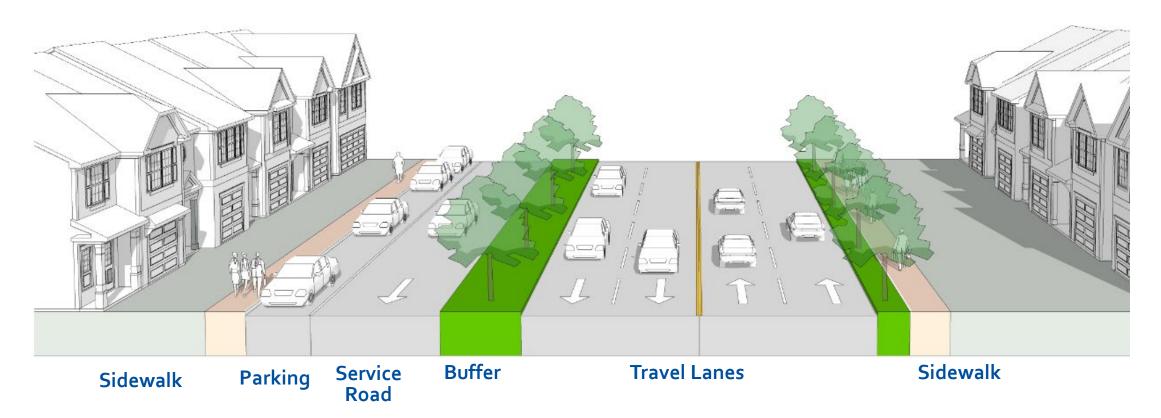


Propose changing to a four-way intersection to include an entrance for commercial property





Segment 2A: Mixed Traffic



Benefits	Trade Offs
 Some improved bus reliability and bus rider experience due to transit signal priority and queue jumps 	 Limited/reduced improvement to bus operation and reliability Limited improvements to corridor safety

*Curb features to be determined at a later stage in the project.



Segment 2A: Mixed Traffic

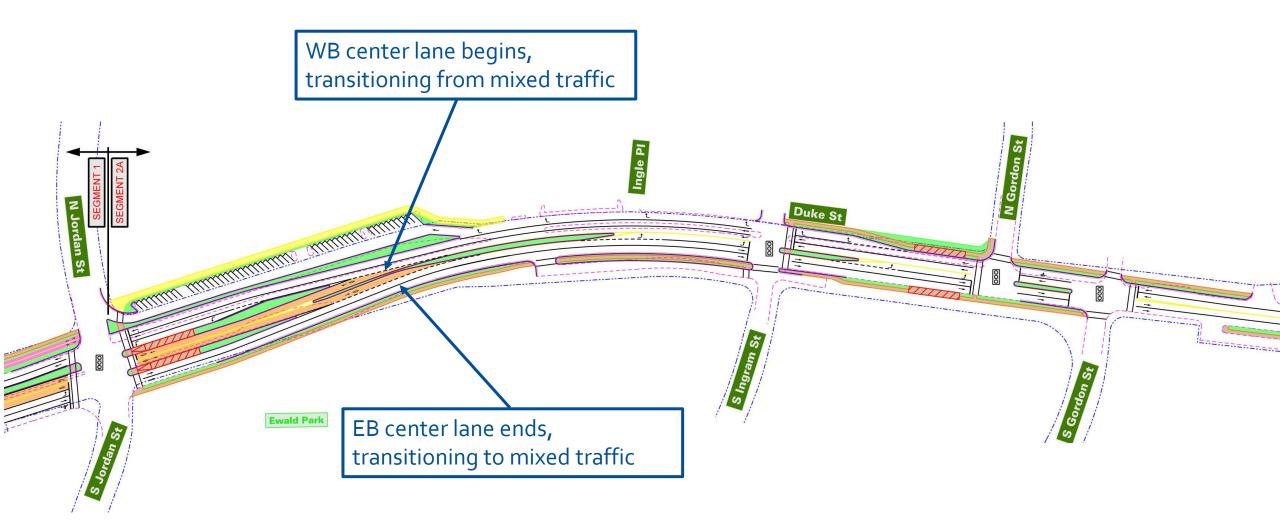


Benefits	Trade Offs
 Some improved bus reliability and bus rider experience due to transit signal priority and queue jumps 	 Limited/reduced improvement to bus operation and reliability Limited improvements to corridor safety

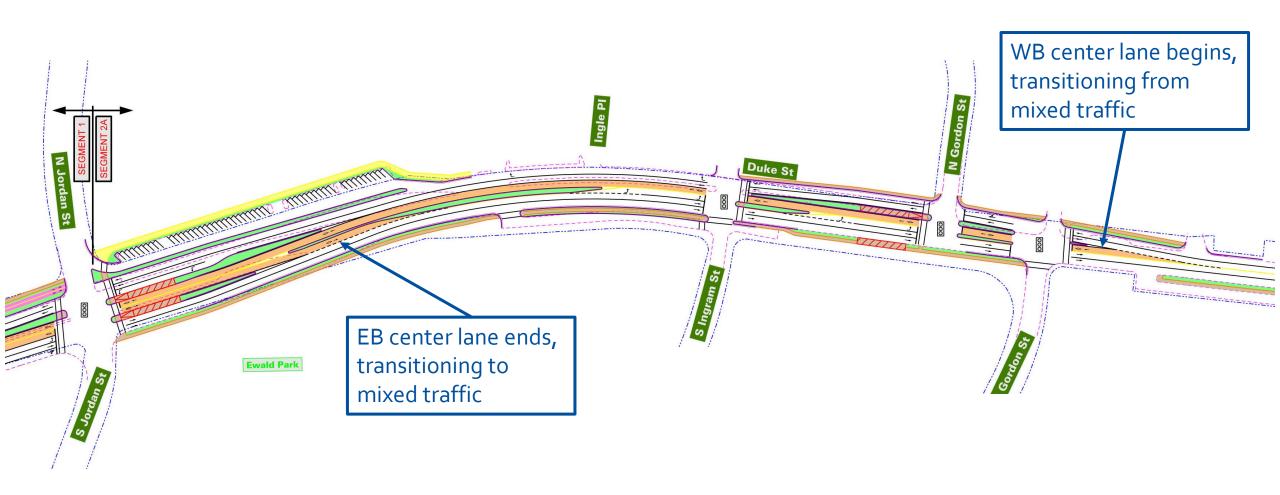
*Curb features to be determined at a later stage in the project.



Segment 1 Center Running Transition to Segment 2A Mixed Running

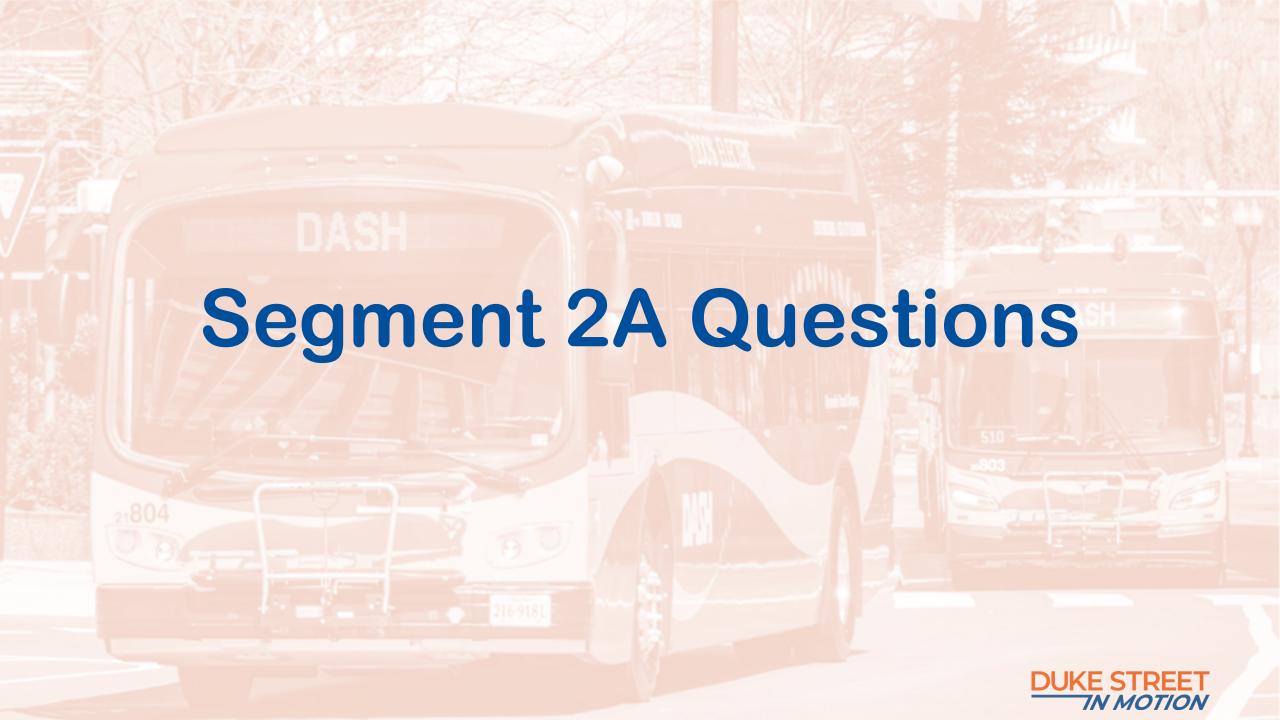


Segment 1 Center Running Transition to Segment 2A Hybrid



Segment 2A: Metroway Transitions









- <u>2 minutes</u> to speak
- Virtual attendees can raise hand in Zoom or press *9 on your phone
- If you have questions or comments after this public comment period, please reach out to Jennifer.Monaco@alexandriava.gov
- Written comments will be shared with the Advisory Group



Discussion

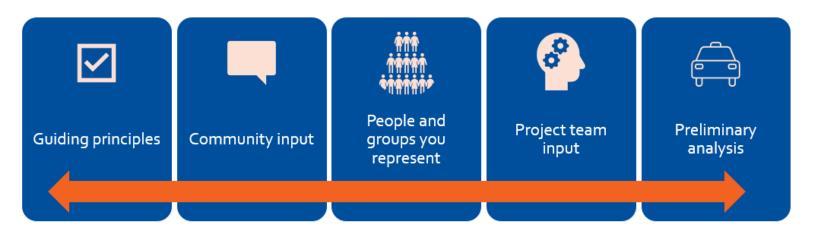
Segment 2A & 2B Near-Term Concepts



Guiding Questions

- Do you have any additional clarifying questions or concerns about the options and potential to adapt?
 - Center
 - Hybrid/Bidirectional/Single direction
 - Mixed
- What direction does the AG want to provide to the project Team for near term alternatives to advance?

CONSIDERATIONS





Selection Factors



Ridership



Walkability



Land Use / Density



Potential for Signalized Crossing



Available Right of Way

Overview of Existing and Proposed Bus Stops/Stations*

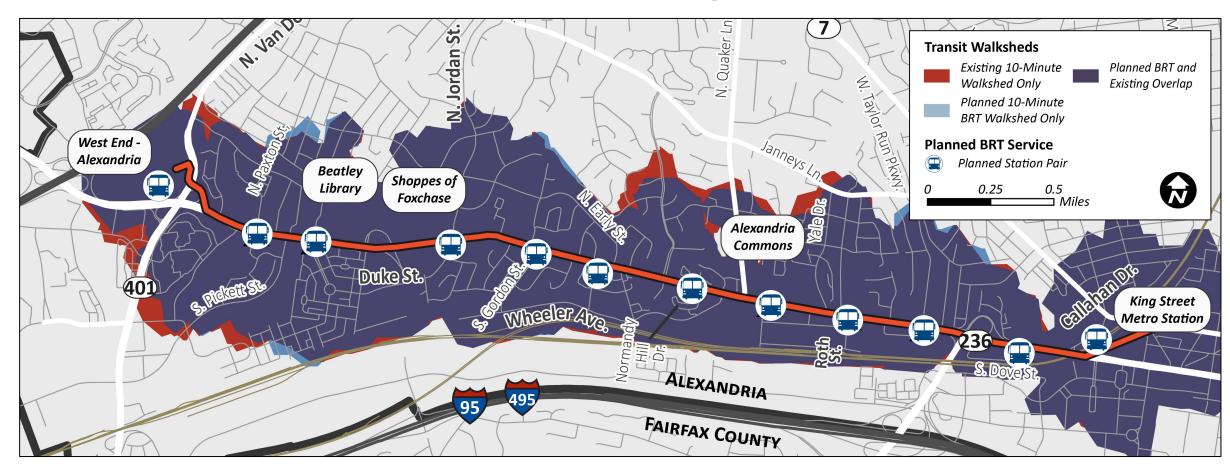


- Existing DASH Route 30 bus stops are about .1-.25 miles between stops
- Metrobus stops: average 0.75 miles between stops
- Proposed bus stops are roughly .25 to .33 mile spacing
- Specific locations may be adjusted based on further design and coordination with WMATA efforts

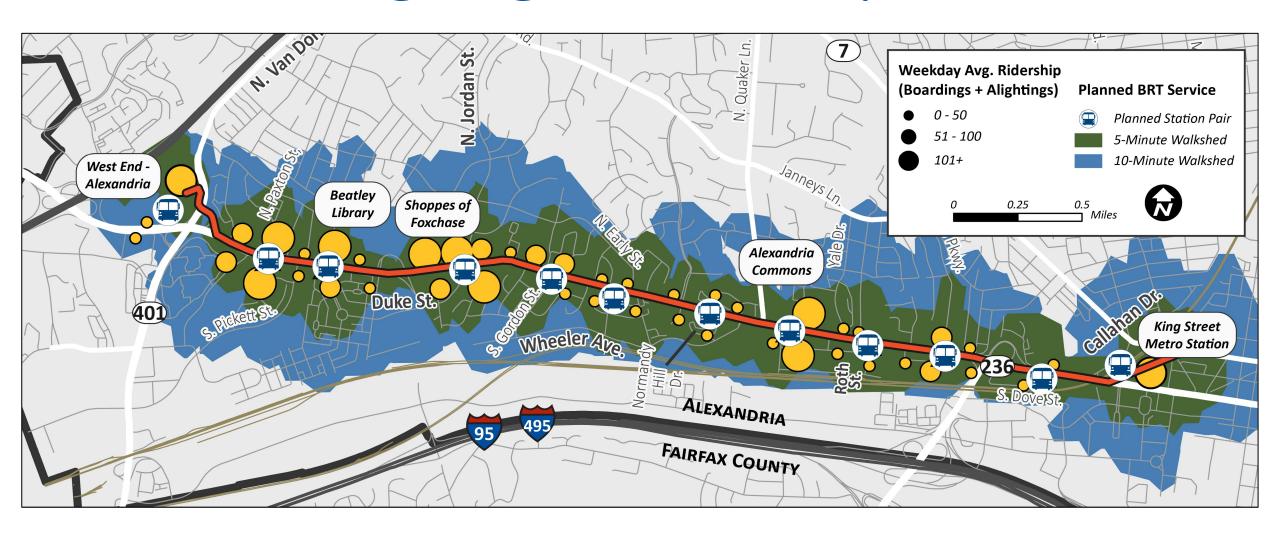


Maintaining Walkability to Stations

The proposed BRT stations maintain a **similar coverage for walking** access (10-minute walkshed: existing vs. proposed stations)



Serving High Ridership Areas



Guiding Questions

- Do you have any questions about the approach to station spacing?
- Do you have any concerns?
- Do you feel comfortable with the general framework for station spacing?
 - One quarter to one third mile spacing
 - Selection factors



Future Meetings

Feb 16

Curb Features Discussion

April 13

- Review Detailed Analysis
- Start of Public Engagement

May 25

 Provide Recommendation of Near-Term Preferred Alternative

Approval of Meeting Minutes from November





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