

US 29 Mobility and Reliability Study – Project Findings

US 29 Corridor Advisory Committee Update
10.6.22

Agenda

- Welcome and Introductions
- Study Goals & Objectives
- Study Recap/Outcomes
- Corridor Alternatives
 - Concept Design
 - Costs
 - Traffic Operations
- Next Steps
- Questions & Answers

Project Goals

Identify improvements on US 29 (Colesville Road / Columbia Pike) that:

- Complement the investment in US 29 Flash bus service
- Improve corridor travel time and reliability for all modes
- Increase pedestrian and bicycle access and safety



Previous Study Recap/Outcomes

- Project team studied Managed (Bus/HOV) lane and Median bus lane concepts in 2020
- Team also identified pedestrian and bicycle access improvements to Flash stations between Silver Spring and Tech Road
- Findings were presented to the Council Transportation and Environment (T&E) Committee in January 2021
- T&E Committee requested additional study of the median bus lane
- County Council approved funding to advance pedestrian and bicycle improvements as part of the FY23-28 budget
- Other MDOT SHA projects underway (e.g. Oak Leaf traffic signal, Stewart Lane pedestrian improvements)



Alternatives Evaluated

- **No-Build:** No changes to existing conditions
- **Managed (Bus/ HOV) Lanes:** Musgrove Road to Spring Street and **Bus on shoulder** north of Musgrove Road
- **Dedicated Median Bus Lane:** Tech Road to Sligo Creek Parkway

Questions for the CAC

1. Which corridor alternative do you prefer?
2. Should a Flash station be added at Franklin Avenue?

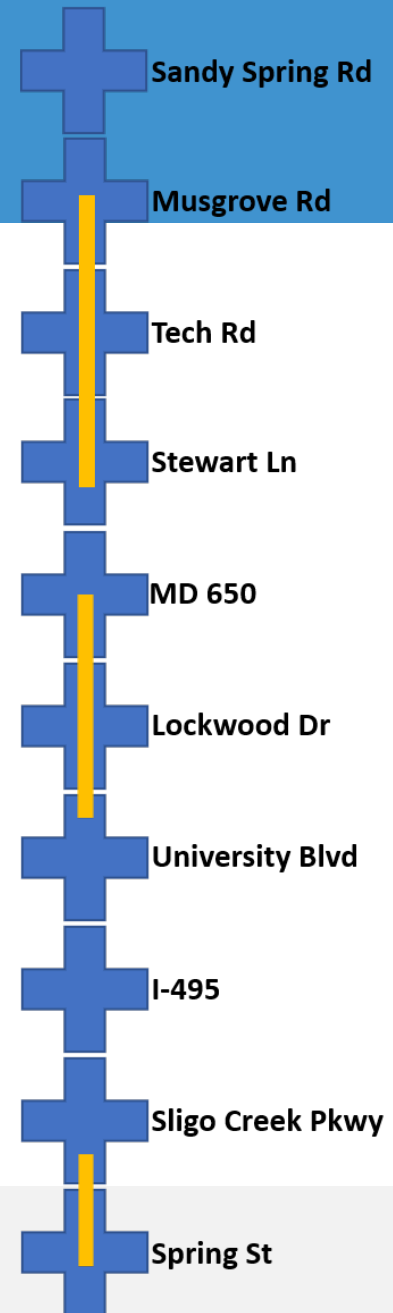
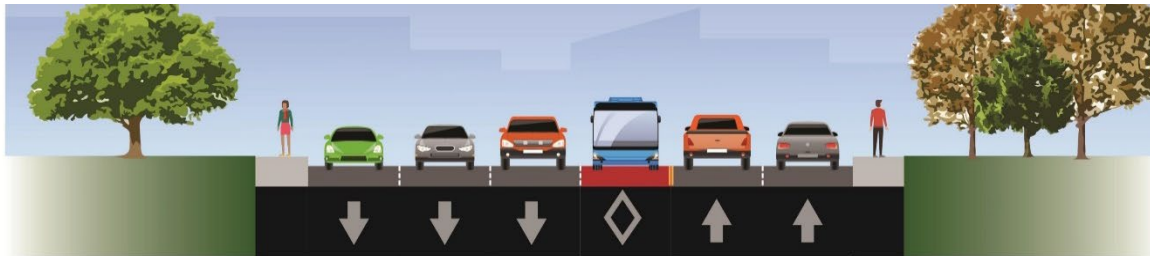
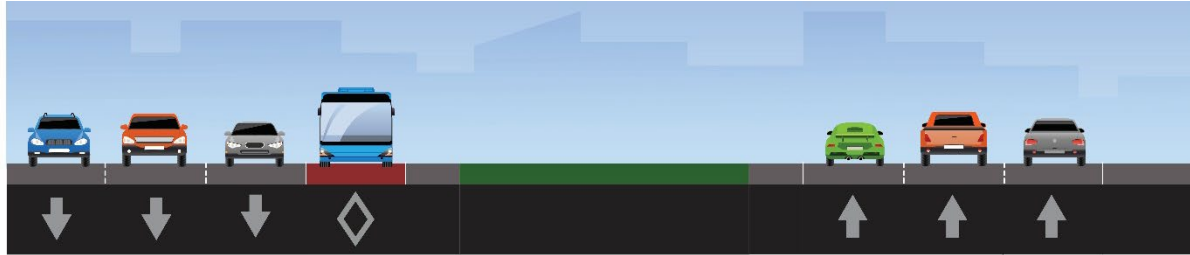
Managed (Bus/HOV) Lane Alternative

- Managed (Bus/HOV) lane from Musgrove to Stewart, MD 650 to Southwood/Burnt Mills, and Dale Drive to Spring Street
- Includes intersection improvements at Greencastle, Tech, Stewart, MD 650, I-495, and Sligo Creek Pkwy
- May require changes to Burnt Mills and Four Corners Flash stations and traffic signal at Hillwood Drive
- No changes to lane widths



Managed (Bus/HOV) Lane Alternative

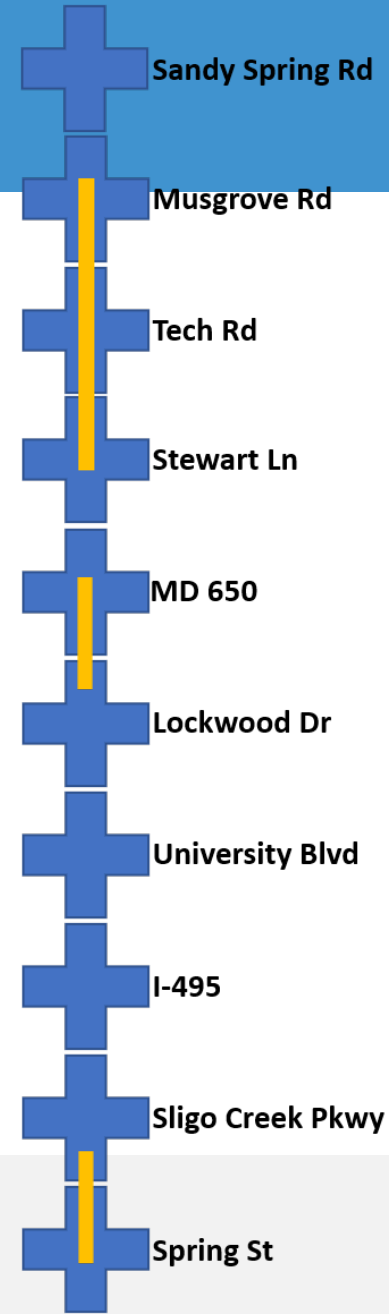
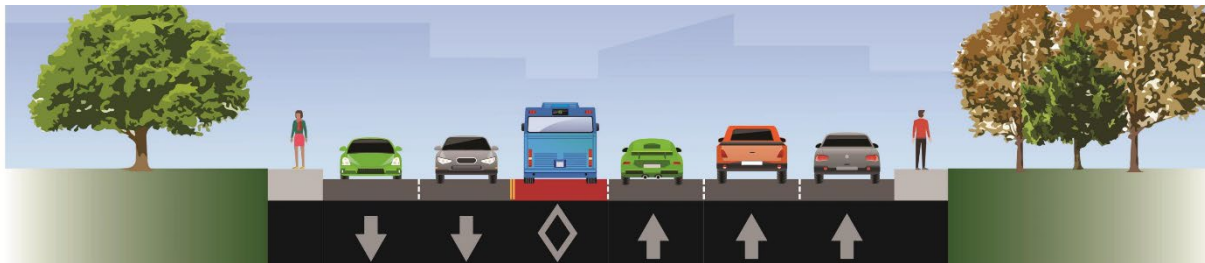
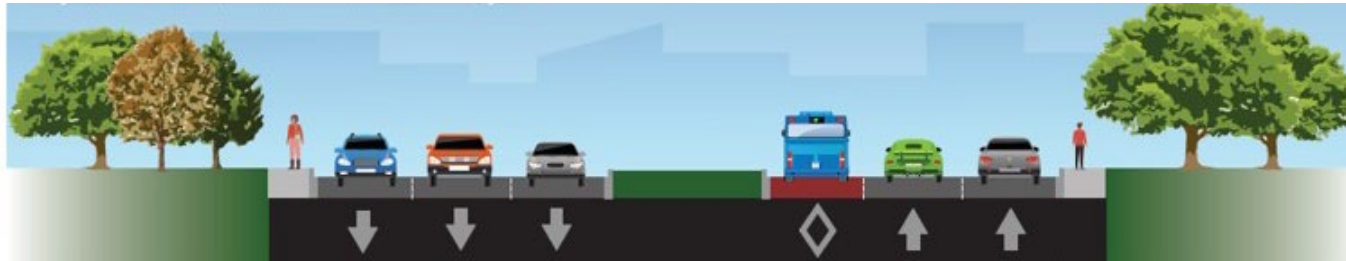
AM Rush Period



*Cross-sections are for illustrative purposes only.

Managed (Bus/HOV) Lane Alternative

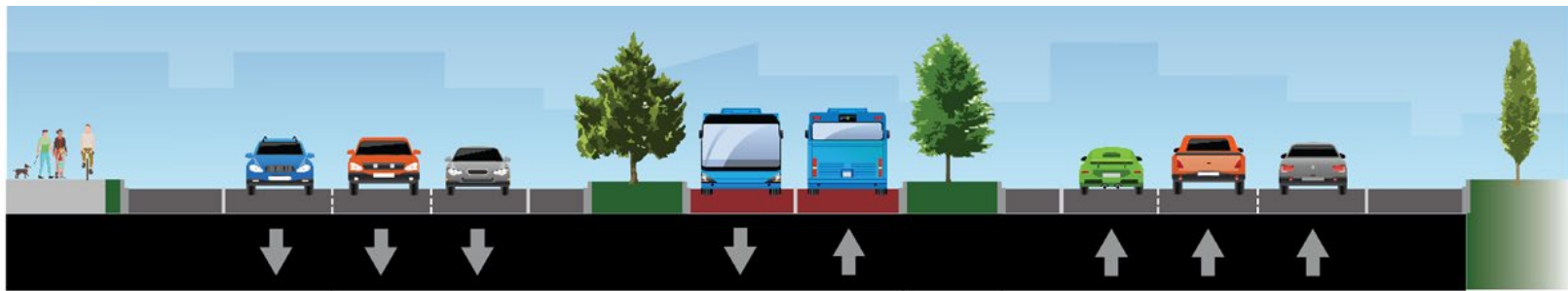
PM Rush Period



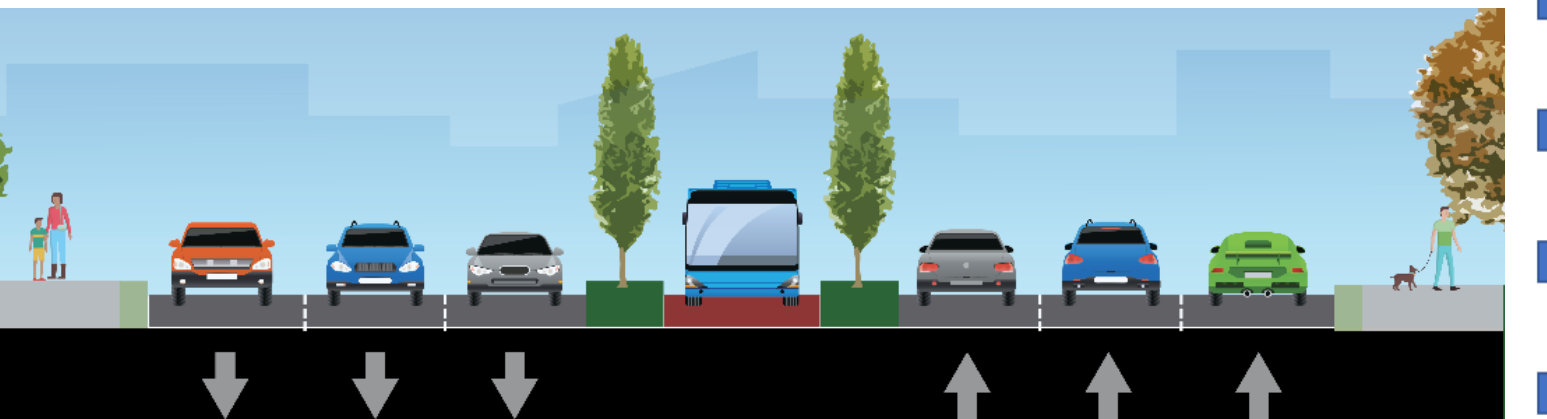
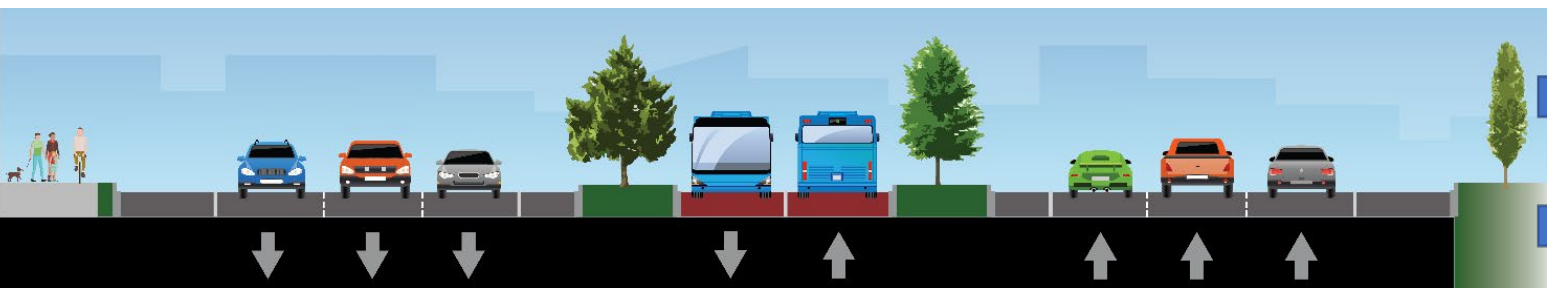
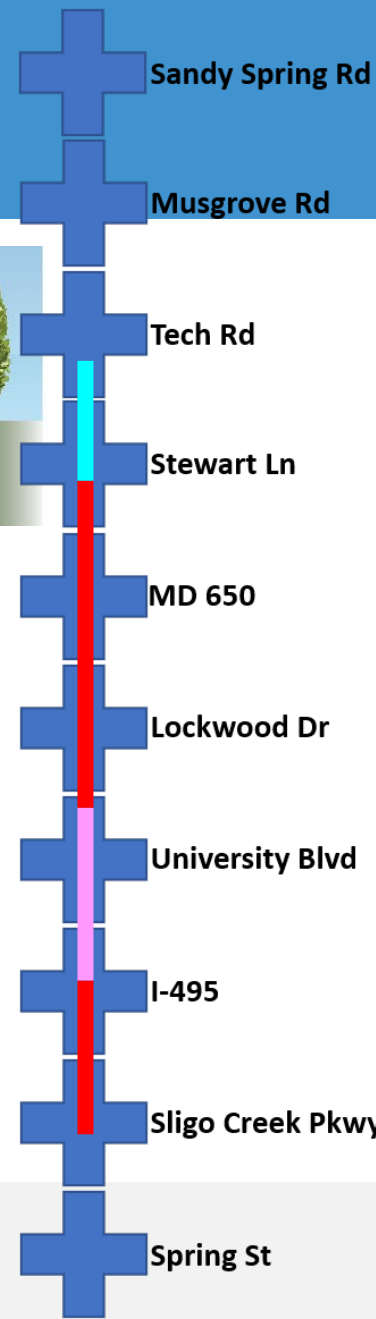
*Cross-sections are for illustrative purposes only.

Median Bus Lane Alternative

- Dedicated bus lane(s) from Tech Road to Silver Spring Transit Center
- Includes intersection improvements at Greencastle and I-495
- Would require relocation of Flash stations at Burnt Mills and Four Corners
- Includes four (4) new traffic signals and some access restrictions
- Does not change lane widths



Median Bus Lane Alternative



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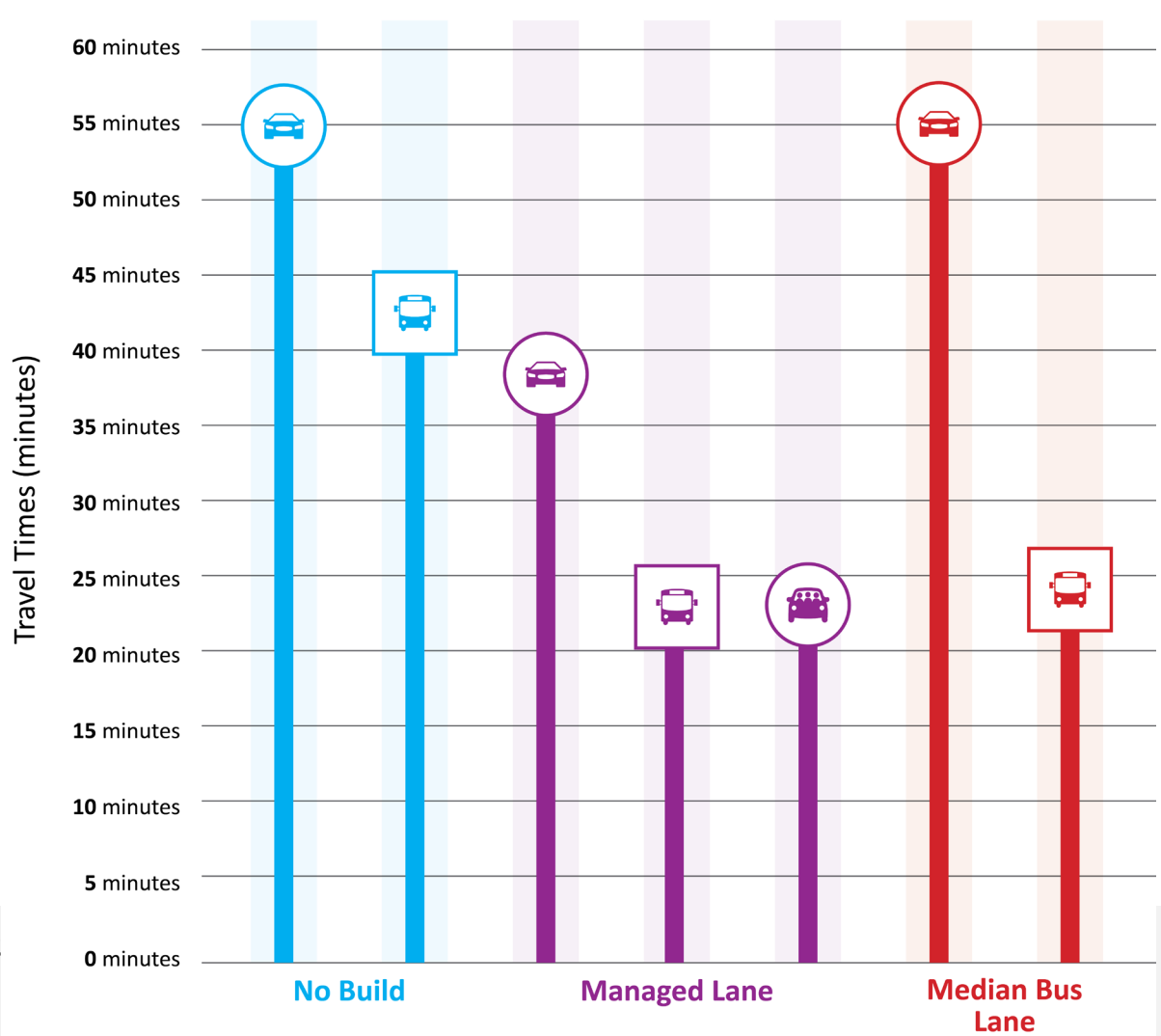
US 29 Mobility and Reliability Study

Bus on shoulder (new lanes)




Dual median busway (new lanes)

Single median busway (new lanes)

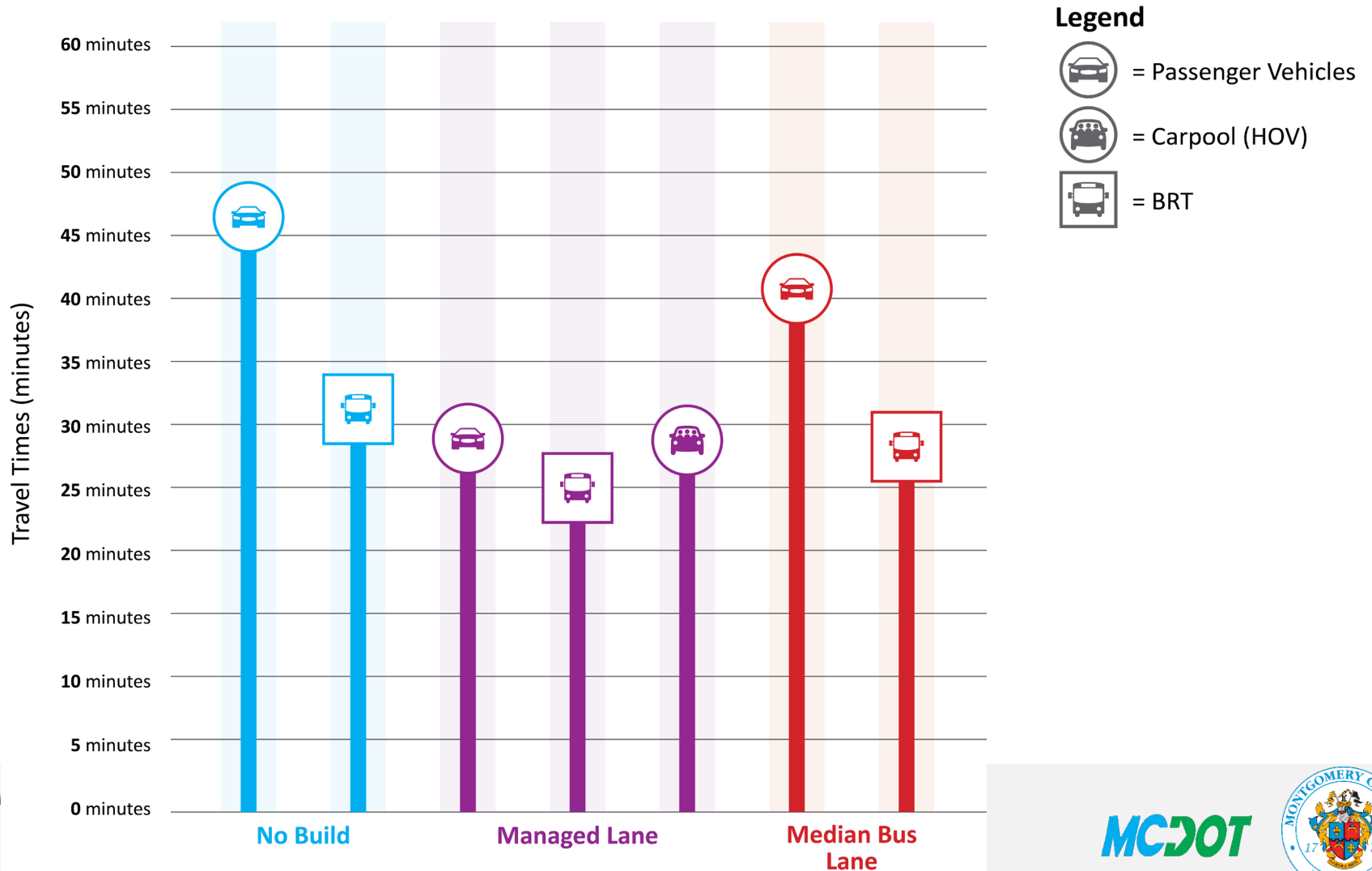
Summary of Results Travel Time - AM Southbound



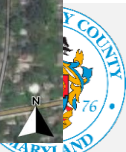
Legend

-  = Passenger Vehicles
-  = Carpool (HOV)
-  = BRT

Summary of Results Travel Time - PM Northbound



Median Bus Lane Alternative: Left-turn Prohibitions



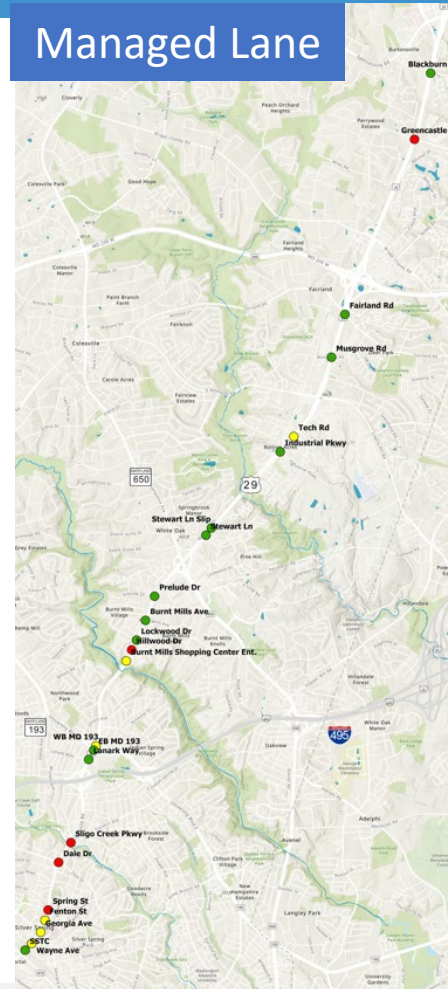
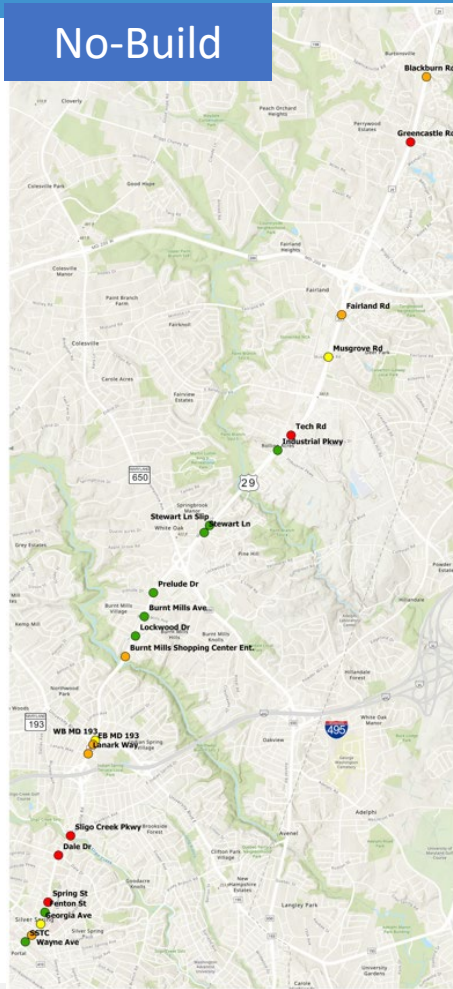
Comparison of Alternatives

		No Build	Managed (Bus/HOV) Lane Alternative	Median Bus Lane Alternative
Travel Time (minutes)	Passenger Vehicle: AM SB (PM NB)	55 (47)	33 (29)	55 (41)
	BRT: AM SB (PM NB)	43 (32)	23 (25)	24 (27)
Number of Level of Service E/F Signalized Intersections AM (PM)		11 (8)	5 (5)	13 (11)
Person Throughput AM (PM)		3800(4250)	4550(4650)	3850(4250)
Right-of-Way (acres)		-	6.9*	5.5
Cost		-	\$105 million**	\$125 million

* Includes right-of-way for **optional** Burnt Mills (1.5 acres) and Four Corners (1.2 acres) stations.

** Includes costs of **optional** Burnt Mills (\$16.6M) and Four Corners (\$8.7M) stations.

Comparison of Alternatives AM Peak Hour

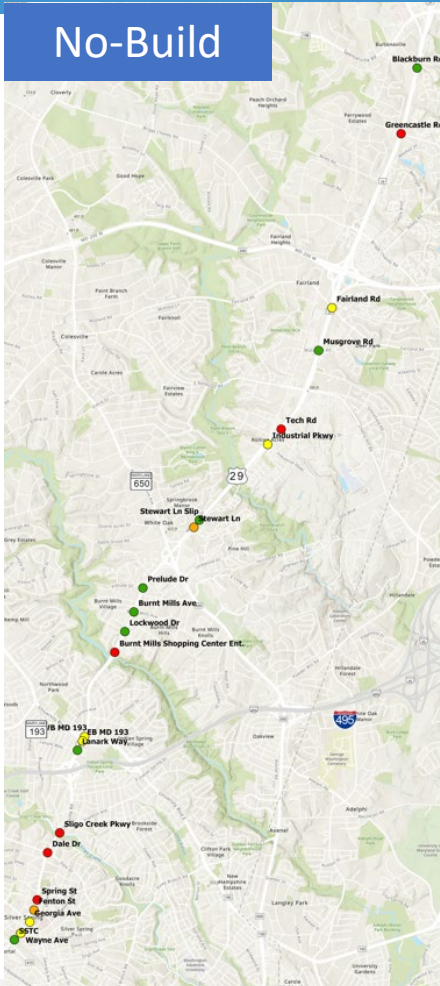


Level of Service (LOS)

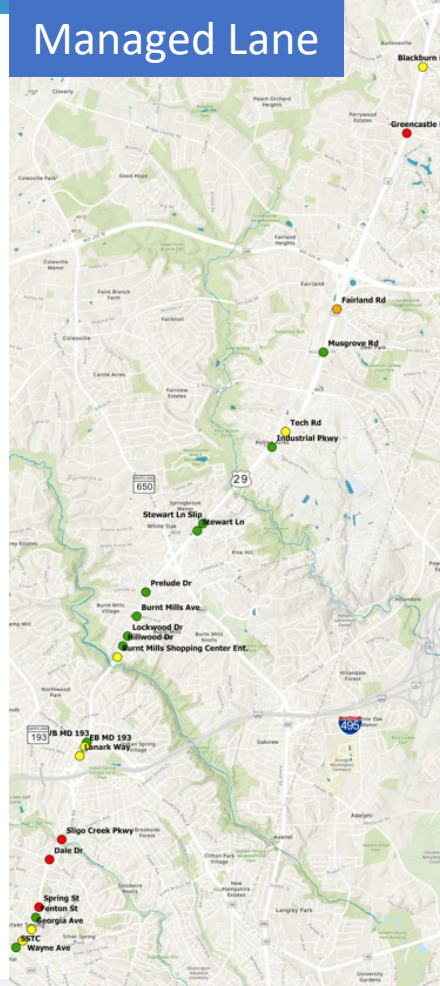
- Intersection
- A, B, C
 - D
 - E
 - F

Comparison of Alternatives PM Peak Hour

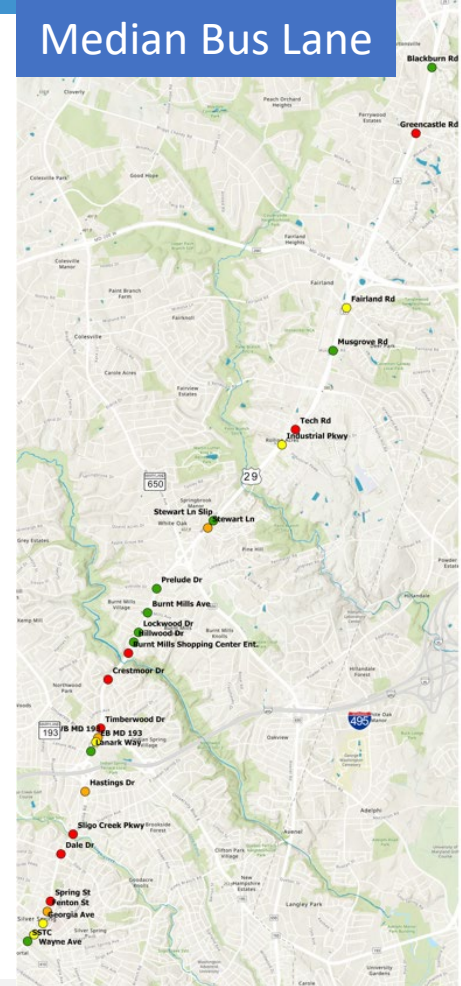
No-Build



Managed Lane



Median Bus Lane



Level of Service (LOS)

- Green dot: A, B, C
- Yellow dot: D
- Orange dot: E
- Red dot: F

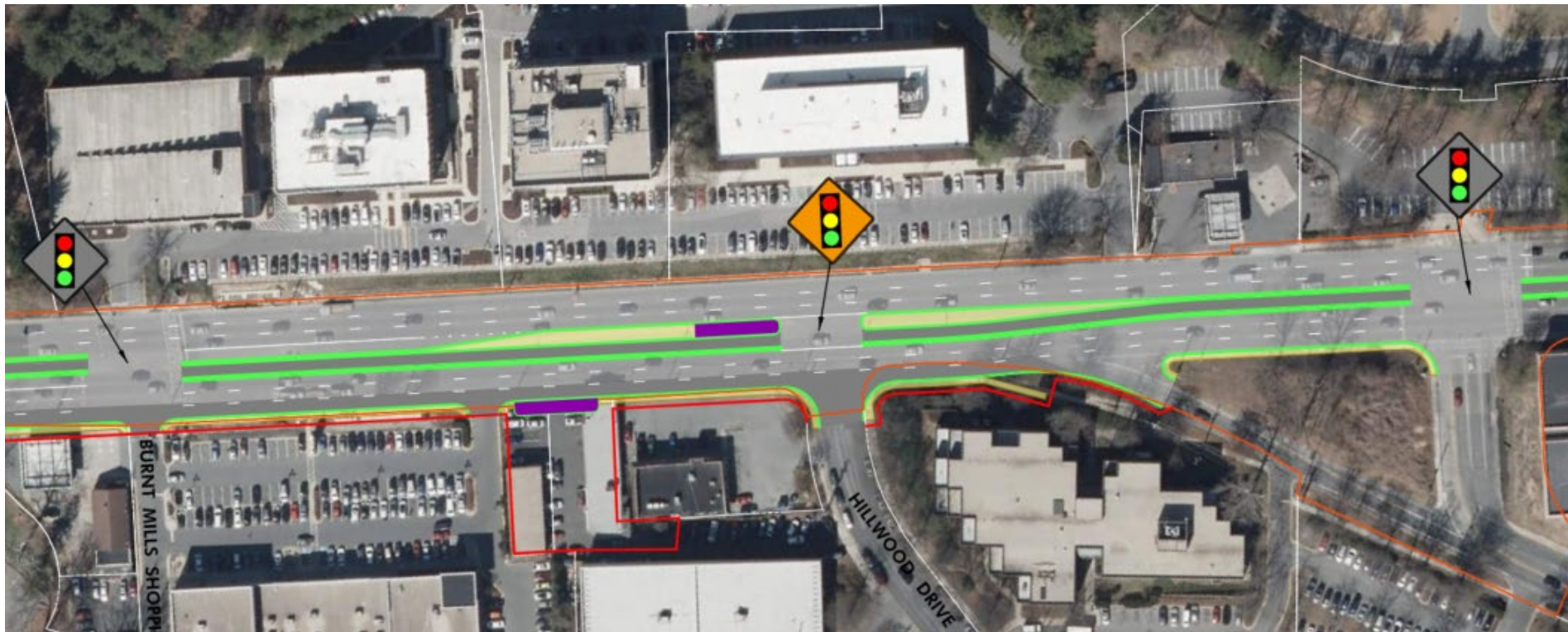
Burnt Mills Station Location/ Design (Optional)

Managed (Bus/HOV) Lane



Burnt Mills Station Location/ Design

Median Bus Lane



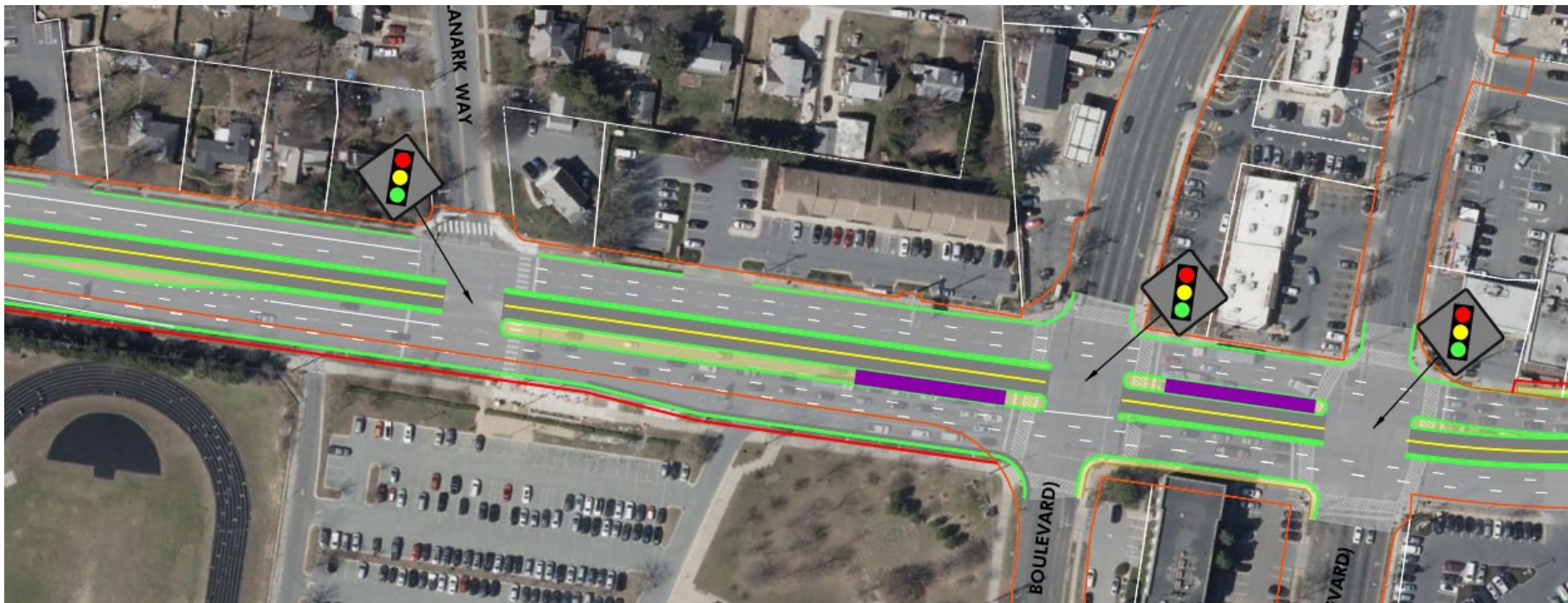
Four Corners Station Location/ Design (Optional)

Managed (Bus/HOV) Lane



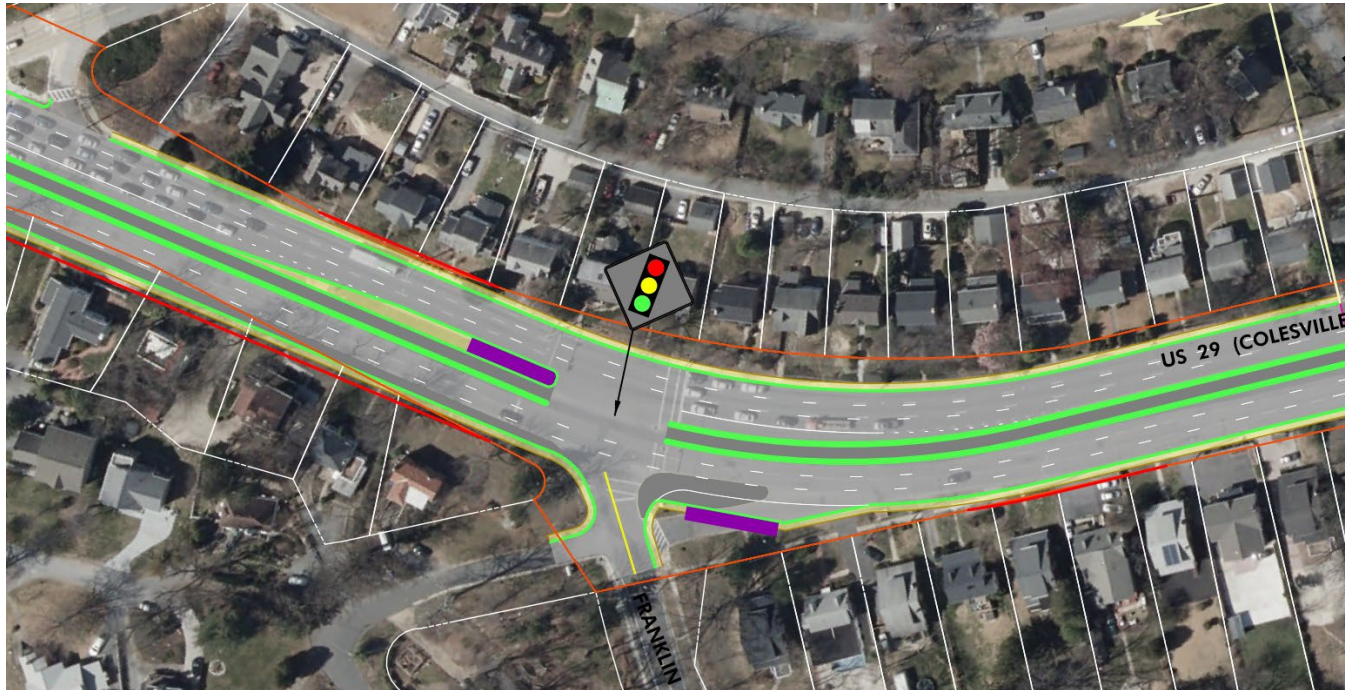
Four Corners Station Location/ Design

Median Bus Lane



Franklin Station Location/ Design (Optional)

Median Bus Lane



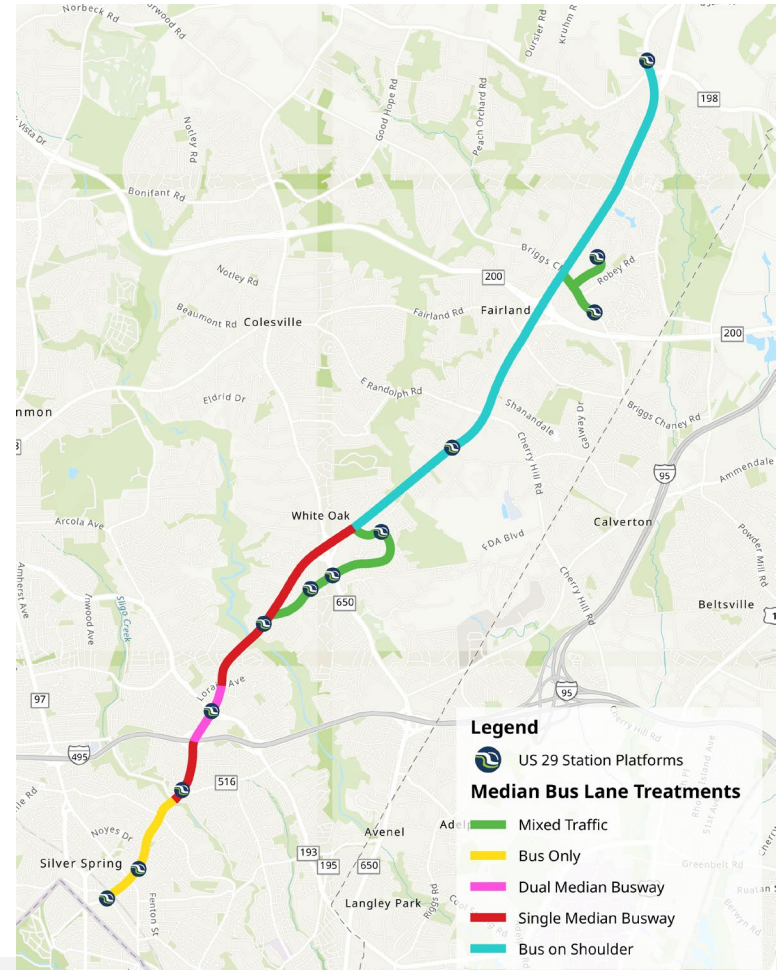
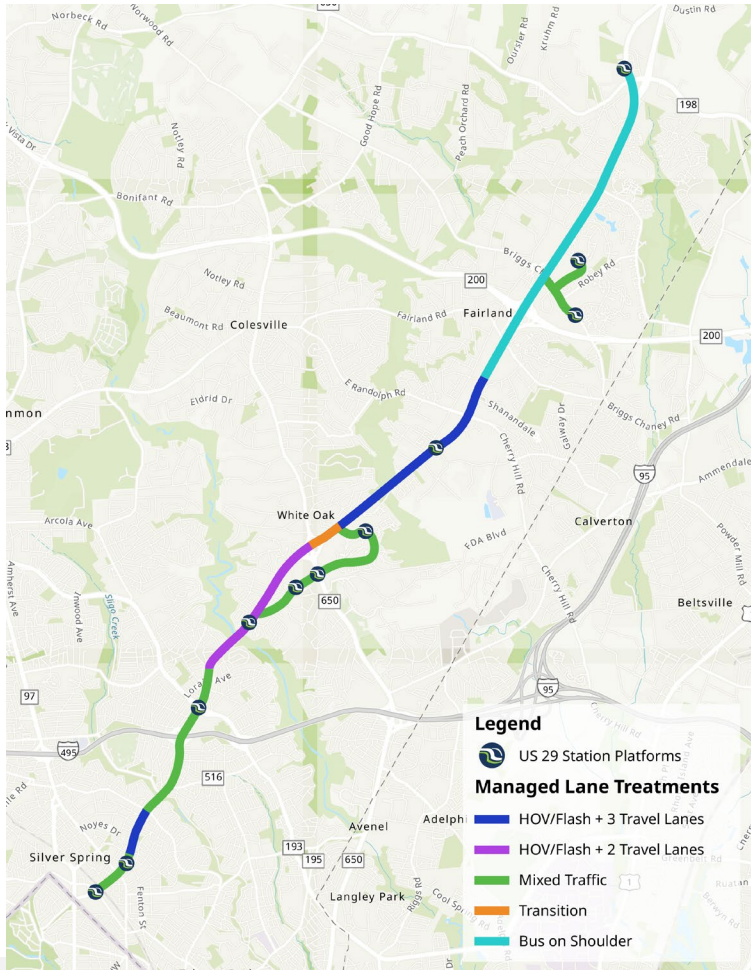
- Requested during previous community outreach
- Permanent station locations (i.e. do not change by time of day)
- Estimated ridership – 200 daily riders
- Estimated station cost – \$4M

Dedicated Bus Lanes between Sligo Creek Parkway and SSTC

- Multiple dedicated bus lane scenarios were evaluated between Sligo Creek Parkway and Silver Spring Transit Center
 - All showed potential for bus travel time savings
 - There were some questions about the impacts of northbound bus lanes during the PM peak
- The return of traffic following COVID has been inconsistent depending on the area and corridor. The model **does not** capture this.
- The Division of Traffic Engineering and Operations will be leading an effort to better assess priority bus lane concepts through lane repurposing south of Sligo Creek Parkway.

Alternatives Summary

Transitway Type and Station Location



US 29 Mobility and Reliability Study

Summary of Options by Segment

- North (MD 198 to Tech Road)
 - Harden shoulder to create Bus/HOV or Bus-only lane
 - Additional \$52 million
 - Limited benefit given current traffic
 - Fairland/Briggs Chaney Master Plan still underway
- Middle (Tech Road to Sligo Creek Parkway)
 - Harden shoulder and repurpose lanes to create Bus/HOV or Bus-only lane
 - Potential to add a station a Franklin Avenue
 - \$105 Million for Managed (Bus/HOV)
 - \$125 Million for Median
- South (Sligo Creek Parkway to SSTC)
 - Repurpose a single lane in the peak-period/direction to create Bus/HOV or Bus-only lane
 - Division of Traffic Engineering beginning study to explore pilot bus lanes south of Sligo Creek Parkway

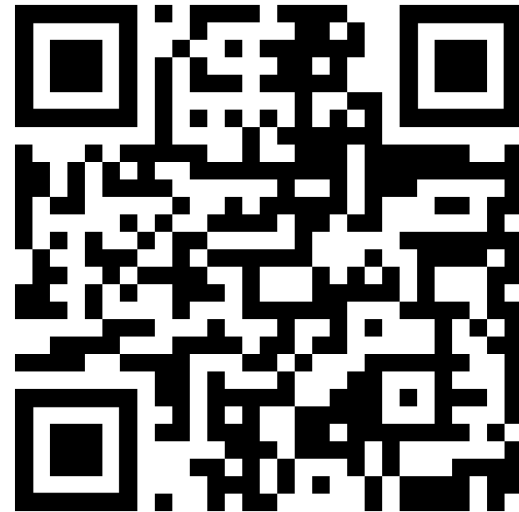
Schedule and Next Steps

- CAC Meeting – October 6th
- Public Meeting – October 13th at Pine Crest Elementary School (7 p.m. to 9 p.m.)
- Planning Board – November 10th
- County Council: Transportation and Environment Committee – November 28th
- Pilot Bus-Only Lane Project Sligo Creek Parkway to Spring Street – TBD

Open Discussion/ Q&A

Please provide input and fill out the survey:

<https://forms.office.com/r/WjES5fQqaw>



Contact

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Note: Email is much preferred for communication, rather than regular mail or our desk phones.