



Purple Line

County Engineers of Maryland

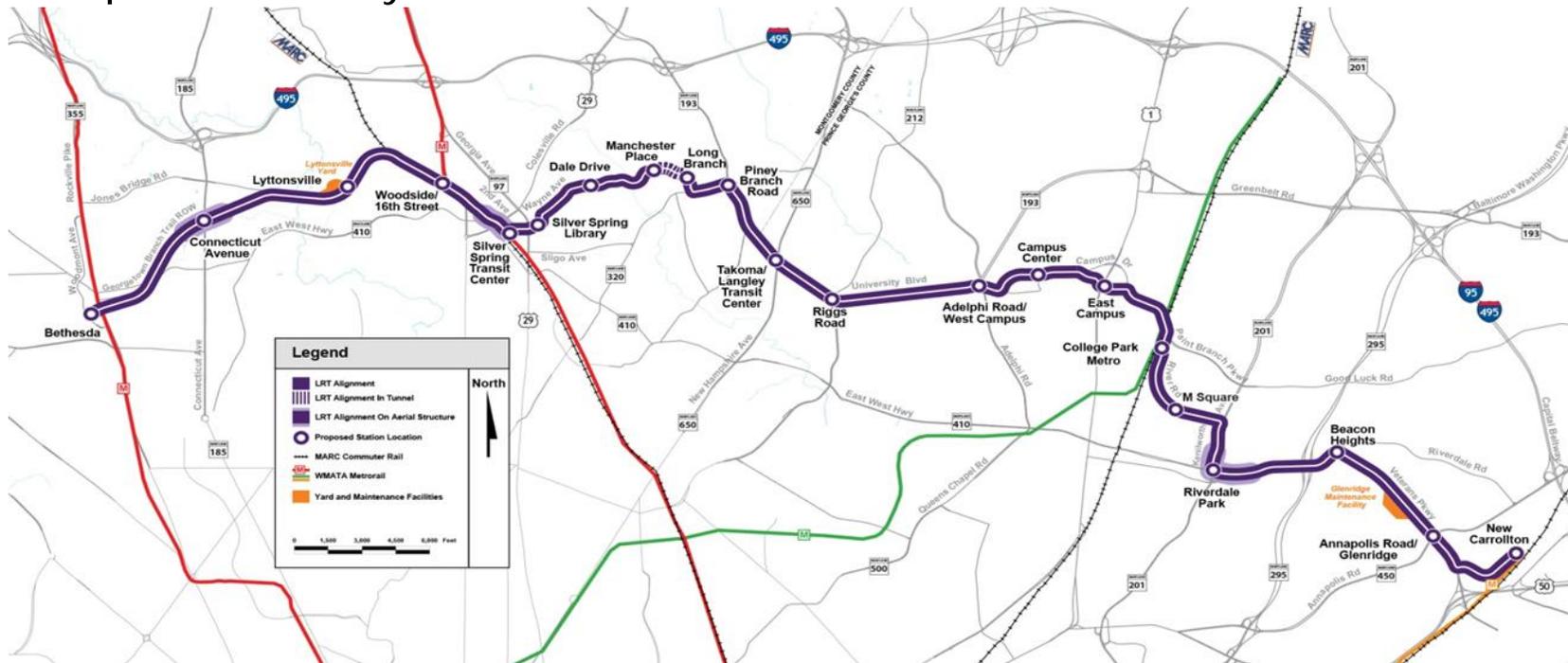
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Maryland Transit Administration

May 25, 2017



Project Description

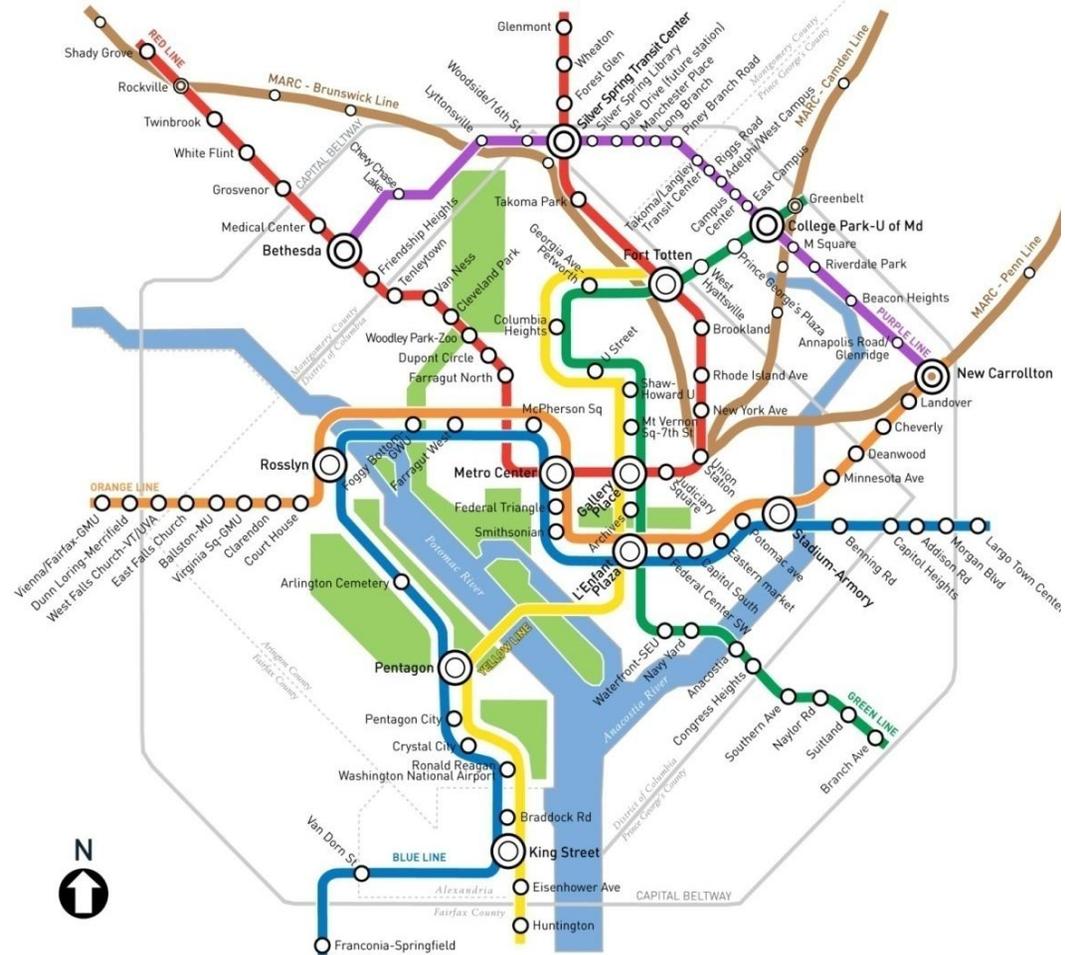
- 16 mile east-west light rail line between Bethesda in Montgomery County and New Carrollton in Prince George's County
- Operates mostly on the surface with 21 stations





Project Overview

- Linking the Washington D.C. region:
 - Links 4 branches of the Metro
 - Red Line at Bethesda
 - Red Line at Silver Spring
 - Green Line at College Park
 - Orange Line at New Carrollton
 - Connects to all three MARC lines
 - Connects to Amtrak Northeast Corridor at New Carrollton
 - Connects to regional and local bus services





Project Characteristics

- \$5.6B, 36-year contract, that expires in 2052
- \$2.0B to construct and \$3.6B to maintain & operate
- Opens with 59,500 daily riders in 2022 that will grow to more than 74,000 riders by 2040
- 26 trains will serve 21 stations. Headways are 7.5 minutes in the peak and 10-15 minutes off-peak
- Fare system will be compatible with WMATA's system
- End-to-end travel time is about one hour



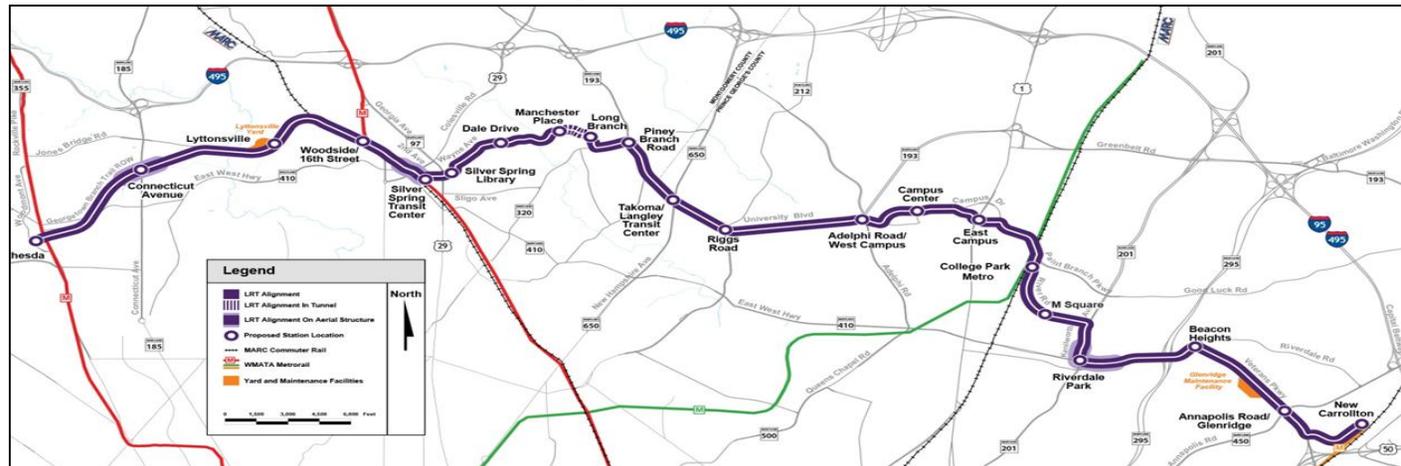
What's the status of the Purple Line?

- Purple Line is being delivered as a Public-Private Partnership (P3) to complete design, construction, operation, maintenance and financing
- Selection of P3 concessionaire announced on March 2, 2016
- Maryland Board of Public Works approved P3 Concessionaire contract with the Purple Line Transit Partners (PLTP) on April 6, 2016.
- Right-of-Way offers and property settlements are continuing
- Pre-construction activities such as survey work and geotechnical investigations are continuing
- Construction start scheduled for early 2017, pending resolution of environmental lawsuit
- Service anticipated to begin in spring 2022



What are the benefits of the Purple Line?

- Improve transit reliability and travel times
- Enhance accessibility and connections by transit within the corridor and the entire Washington DC region
- Connect to major activity centers and employment complexes, and boost local/regional economic vitality
- Support community revitalization and transit-oriented development
- Generate thousands of new jobs





What is P3?

- Combines the design, construction, financing, operations and maintenance into one umbrella contract
- 6 year design/construction + 30 year O&M period
- Shares risk between MTA and the Concessionaire
- Allows the Concessionaire to manage costs and innovate to mitigate risk and earn return on investment
- Based on performance standards, not detailed specifications
- Payments are tied to construction, financing, capital renewal and operating performance
- 30-year handback standards protect long-term public interest



Why go P3 for Purple Line?

- Operational Issues – Purple Line is a natural stand-alone asset that lies outside the MTA's area of operations. The P3 approach also incentivizes higher quality service.
- Project size and level of complexity – 16 mile light rail line appropriate for concessionaire to bid
- Schedule discipline – MTA Agreement structure is focused on asset availability and provides strong incentives for the Concessionaire to deliver the project on time (RSA Payment = \$100M).
- Cost & Constructability – Concessionaire teams were encouraged to propose Alternative Technical Concepts that would save money and improve constructability.
- Risk Allocation – P3 contract provides a reasonable allocation of project risk between the Owner and Concessionaire.
- Performance Incentives – Construction, operations and maintenance activities are subject to financial incentives.



How Does the Concessionaire Get Paid?

- Construction Payments
- MTA will pay the concessionaire \$990 million through a variety of funding sources.
- Concessionaire will finance the remaining \$1 billion which includes a very large TIFIA loan.
- Includes a \$100M Revenue Service Availability Payment.
- Monthly Availability Payments (on average \$147M annually) to the concessionaire once the project opens.
- The concessionaire uses these funds to repay financing as well as fund ongoing operating, maintenance, insurance, and capital renewal costs over the 30 years.



Purple Line Transit Partners (PLTP)

- Long-term investors who intend to stay invested over entire life of the 36-year contract
- Relevant projects include I-495/I-95 Express Lanes P3 in Virginia and Eagle P3 Commuter Rail Project in Denver
- Safety Culture – Key PLTP firms all have accident rates below industry averages
- Emphasis on Partnering – Co-location with Owner for over-the-shoulder design reviews and quality assurance

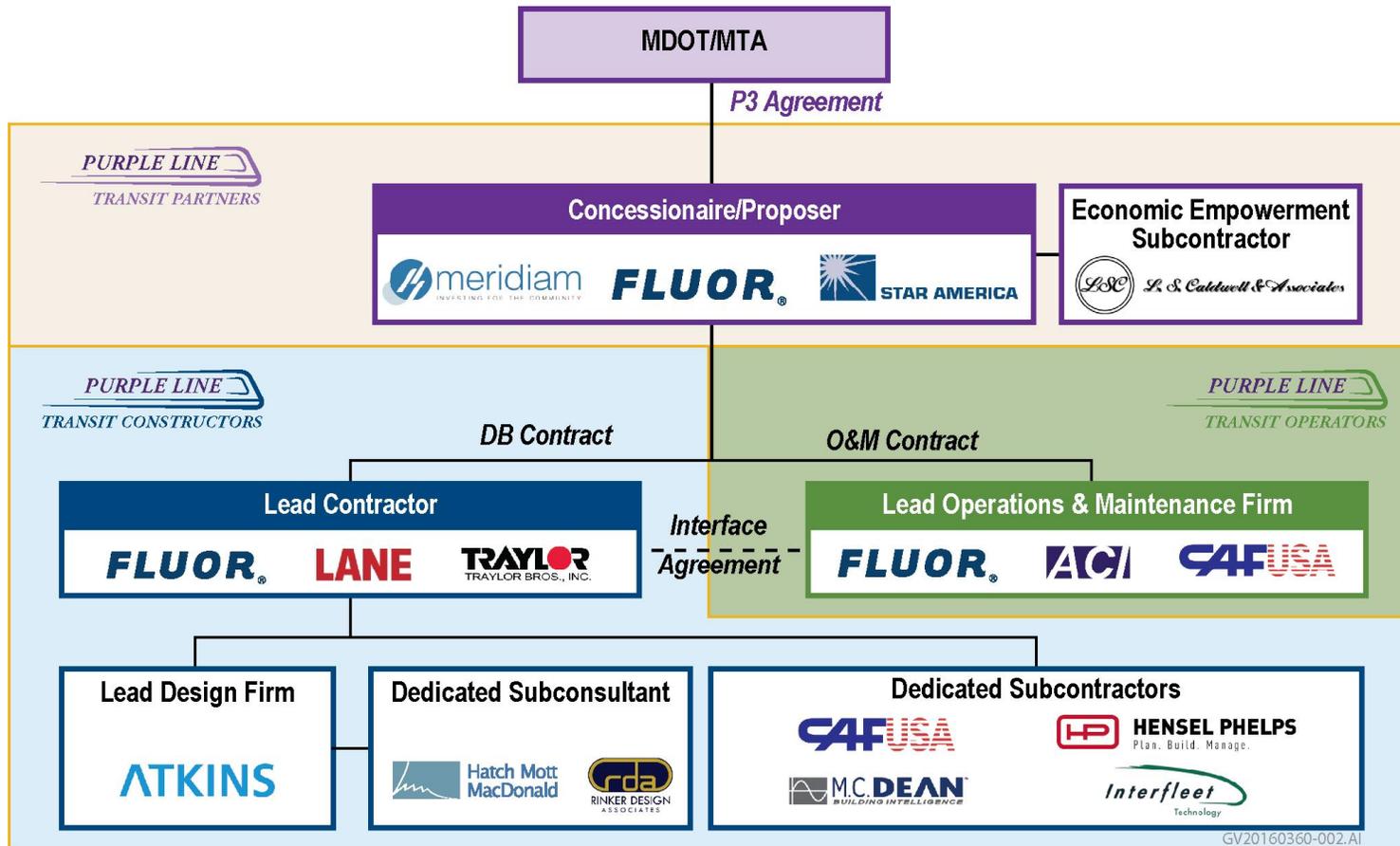


PLTP – Innovative Ideas and a Strong Design

- PLTP offered more innovative ideas and Alternative Technical Concepts (ATCs) than any other proposer
- PLTP's ATCs will save more than \$100M during the construction and will reduce future operational costs and impacts



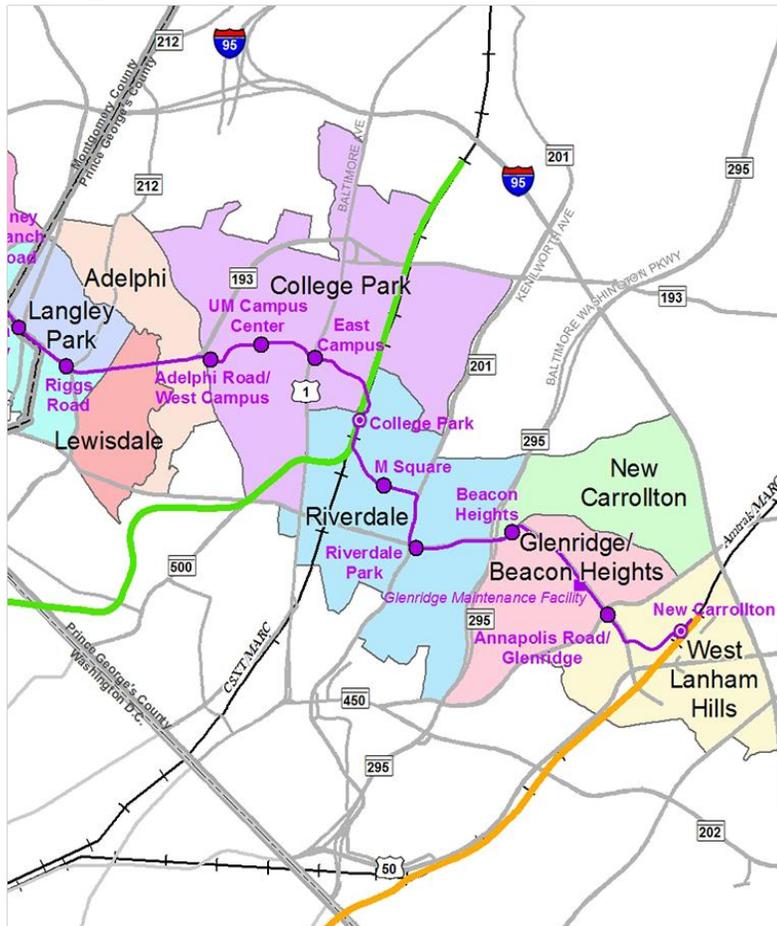
Concessionaire: Purple Line Transit Partners



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Alignment Characteristics – Prince George’s County



- 11 stations and 2 Metrorail connections
- Primary Maintenance Facility at Glenridge
- Serves the core of UMD campus via Campus Drive
- Strong presence of small, independently owned minority businesses. Several community services in the area.
- # of businesses to be relocated:
 - Langley Park: 3
 - Riverdale: 5
 - Glenridge / Beacon Heights: 2
 - West Lanham Hills: 1



Light Rail Vehicle

- 26 Vehicles Made by CAF
- Five Articulated Modules, 139' long
- 80% Low Floor
- 80 Seats
- Max. Capacity – 300 Passengers
- 1500 Volt Operating System
- Eight Wheelchairs and Eight Bicycles Accommodated



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Design Challenges and Solutions

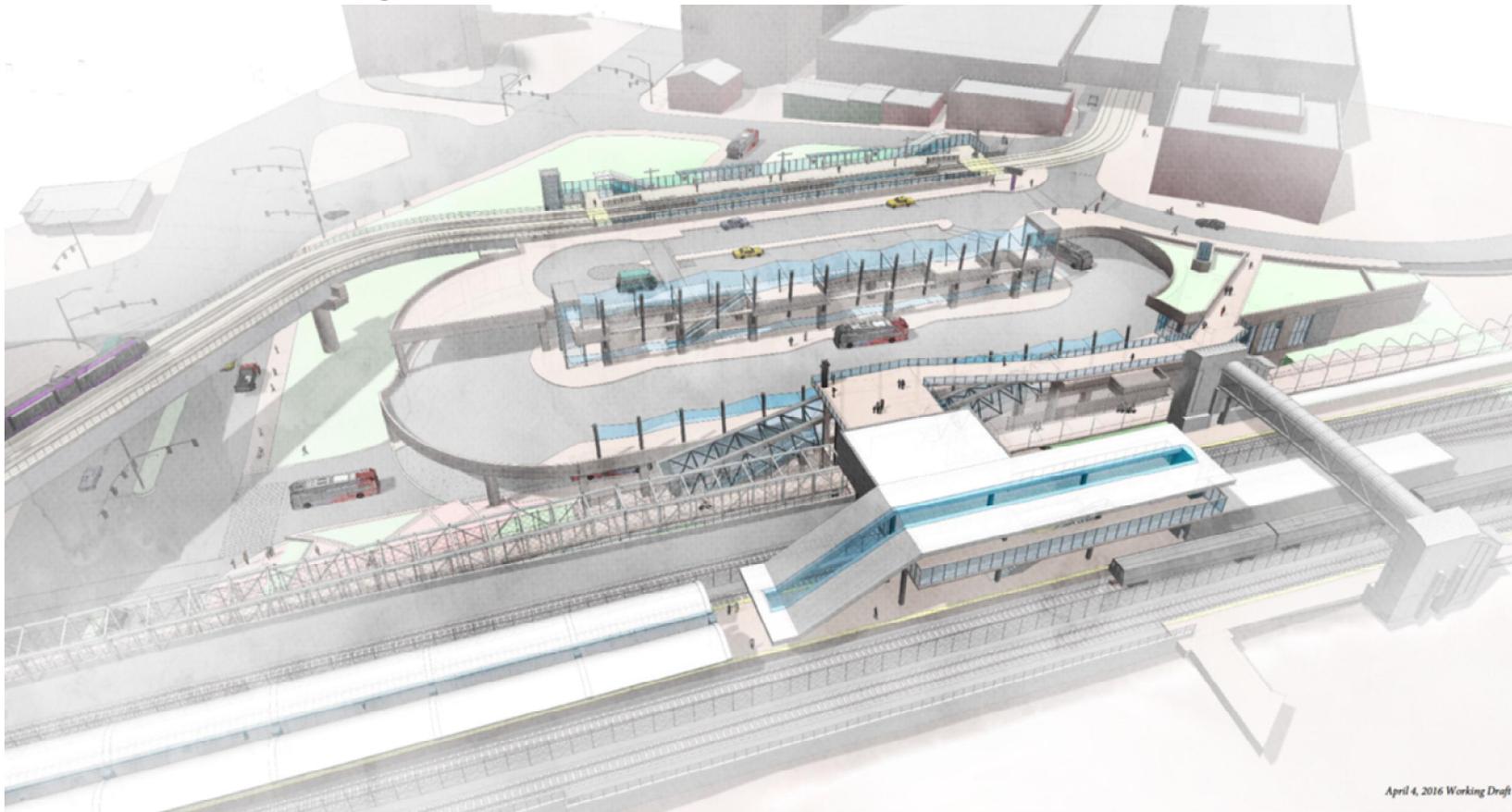


Light Rail Power System

	FEIS Locations, using with 750V			Updated Locations, using 1500V
	Miles from end of line at Bethesda	Distance to next TPSS		
Q01	0.40	0.86	Montgomery Ave, beyond Wisconsin Ave	Montgomery Ave, past Wisconsin Ave
Q02	1.26	1.07	Georgetown Branch right-of-way, prior to Connecticut Ave	
Q03	2.33	0.84	Montgomery County Ride On Depot	Montgomery Co Ride-On Depot
Q04	3.17	1.04	Approaching CSX tracks, near Kansas Ave	
Q05	4.21	0.91	Intersection of Colesville Rd and CSX tracks	
Q06	5.12	0.95	Wayne Ave, just past Cloverfield Rd	Wayne Ave, SSIMS
Q07	6.07	0.79	Arliss St, just past Flower Ave	
Q08	6.86	0.88	University Blvd, just past Seek Ln	University Blvd, just past Seek Ln
Q09	7.74	0.83	University Blvd, past 14th Avenue	
Q10	8.57	0.87	University Blvd, just before 23rd Ave	
Q11	9.44	1.12	Intersection of Campus Dr and Presidential Dr	Campus Dr, east of Adelphi Rd
Q12	10.56	1.03	UMD campus, just past East Campus Station	
Q13	11.59	0.86	UMD property, past College Park Metro Station	UMD property
Q14	12.45	0.94	River Rd, prior to Kenilworth Ave	
Q15	13.39	0.82	Intersection of Riverdale Rd and 61st Pl	
Q16	14.21	0.99	Veterans Pkwy, beyond Riverdale Rd	Patterson Street
Q17	15.21	0.93	Veterans Pkwy and Annapolis Rd	
Q18	16.14	--	Ellin Rd, beyond Emerson Pl, adjacent to WMATA (0.21 miles to the end of the line)	Ellin Road



Silver Spring Station

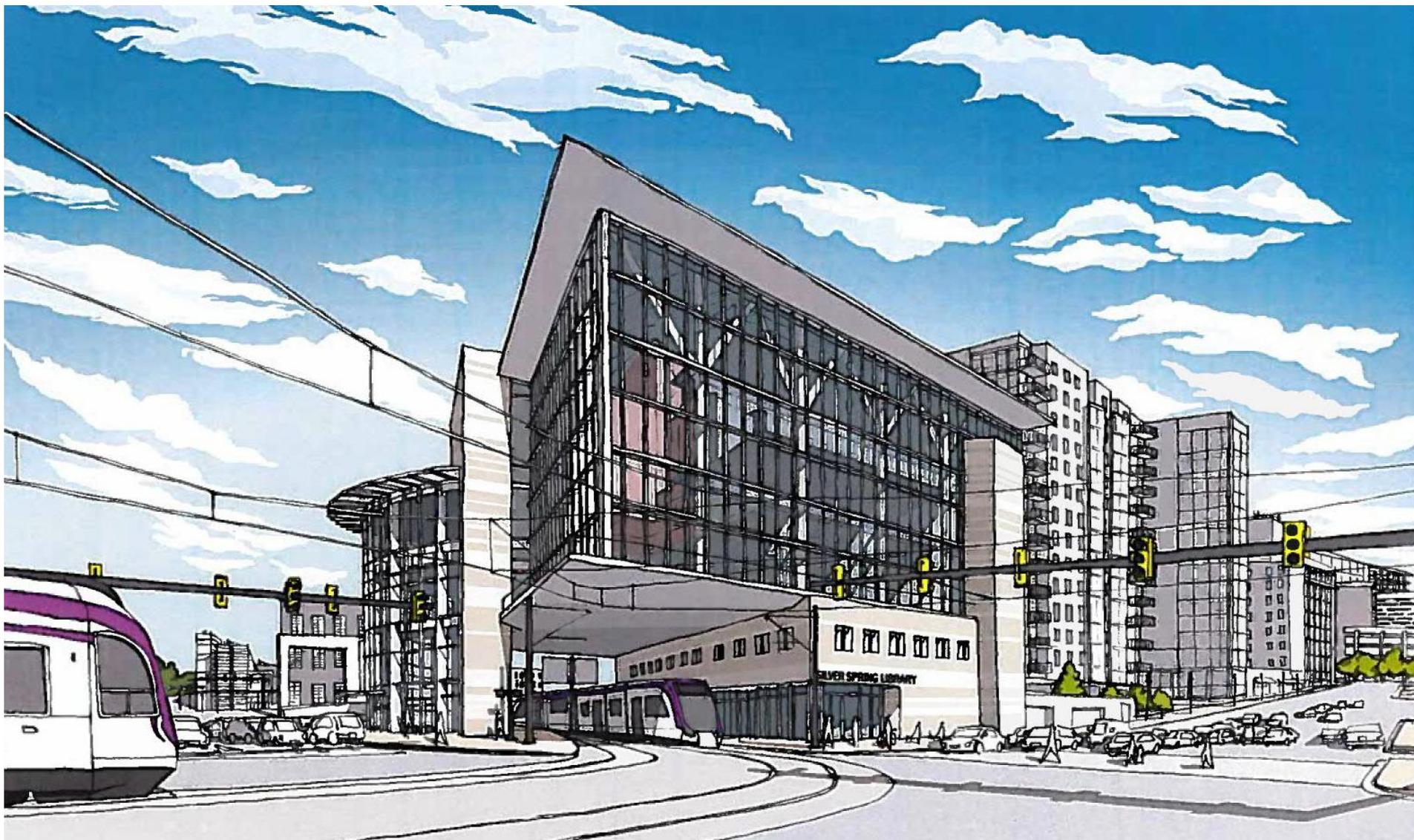


- Reduces station height from 80' to level with the SSTC upper level
- Does not displace building at 1110 Bonifant Street

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Silver Spring Library Station





University Boulevard

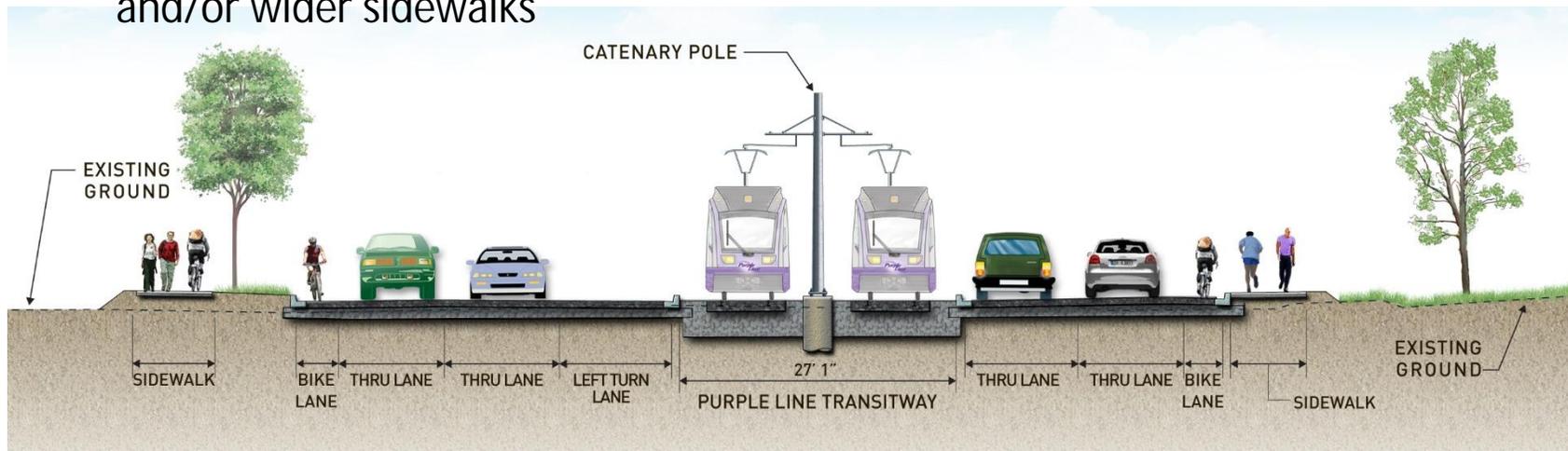
- Existing conditions
 - Six-lane road
 - Service roads
 - High pedestrian activity
 - High pedestrian crash rate compared to statewide average
 - Low auto ownership





University Boulevard Solution

- Convert two existing roadway lanes to transit
 - 22' less than prior alternative
- Improves pedestrian facilities/safety
- Provides opportunities for wider sidewalks and green buffers in some areas
- Significantly reduces right-of-way impacts
 - Reduces building displacements from 11 to six
 - Maintains a portion of several service drives and residential and commercial parking lots (120 fewer residential spaces lost)
- Provides more space for future sector plan improvements such as cycle tracks and/or wider sidewalks





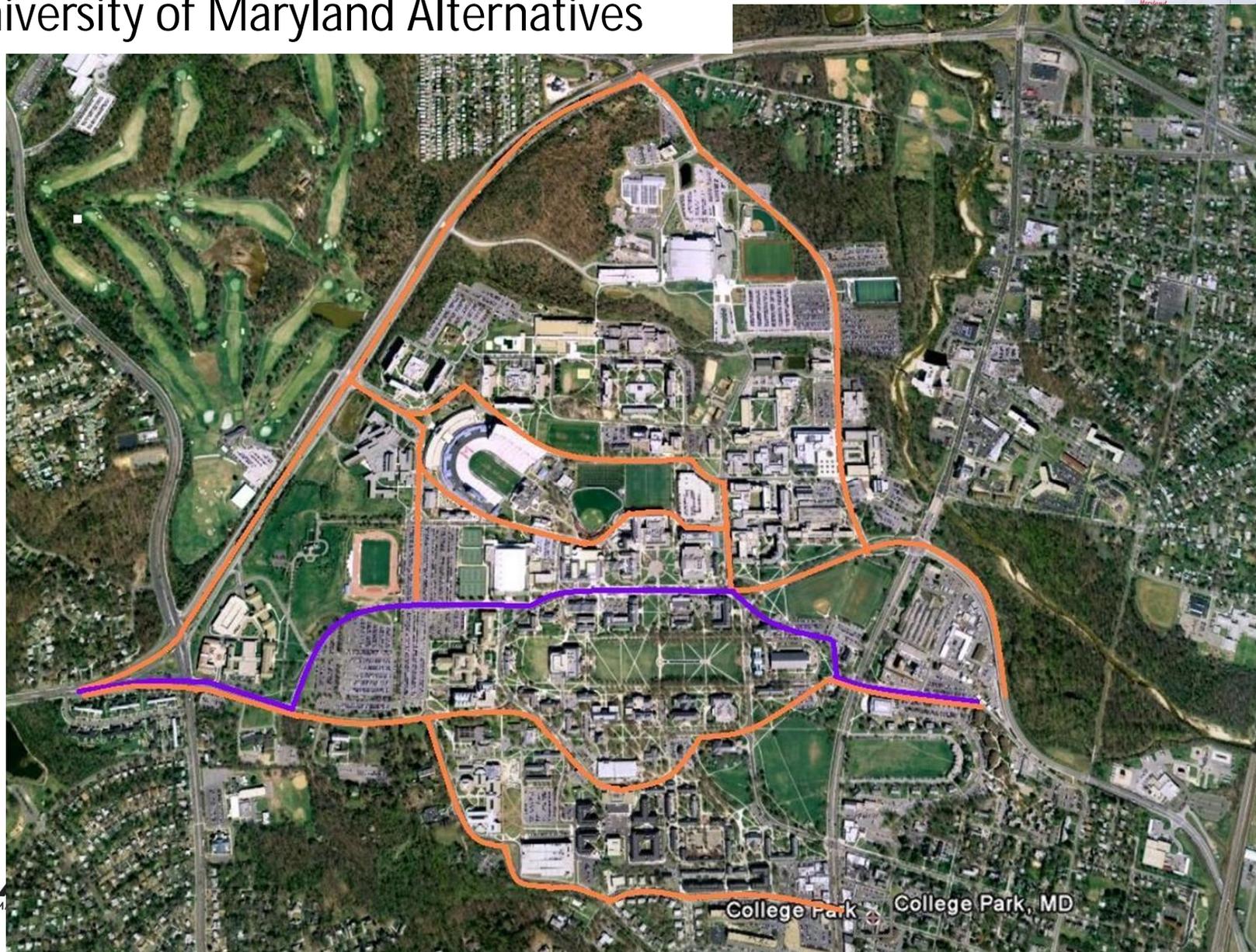
University of Maryland Considerations

- Five Purple Line Stations
 - 37,000 Students
 - 14,000 Faculty and Staff
 - Major Athletic and Cultural Events
- Purple Line concerns on campus
 - Pedestrian safety
 - Traffic routing
 - EMI (interface with research equipment)
 - Vibration
 - Aesthetics
 - Security



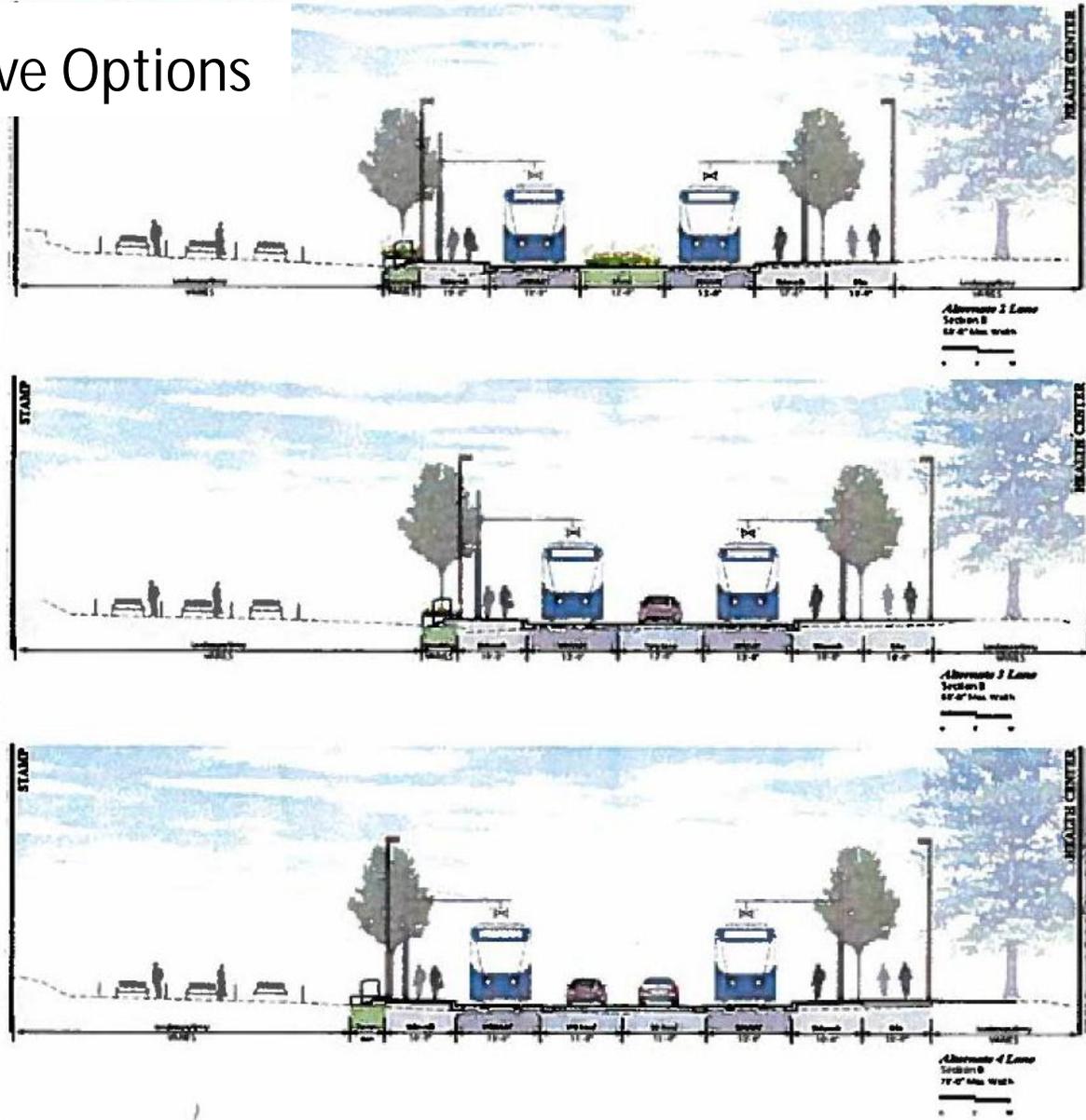


University of Maryland Alternatives





Campus Drive Options



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University of Maryland - Campus Drive



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College Park Metro Station





Riverdale Park Station – looking southwest



- Change Order to return to original open design coordinated between MTA and Prince George's County
- Provides light, open space beneath station
- Enhances connectivity and improves aesthetics
- Supports future development

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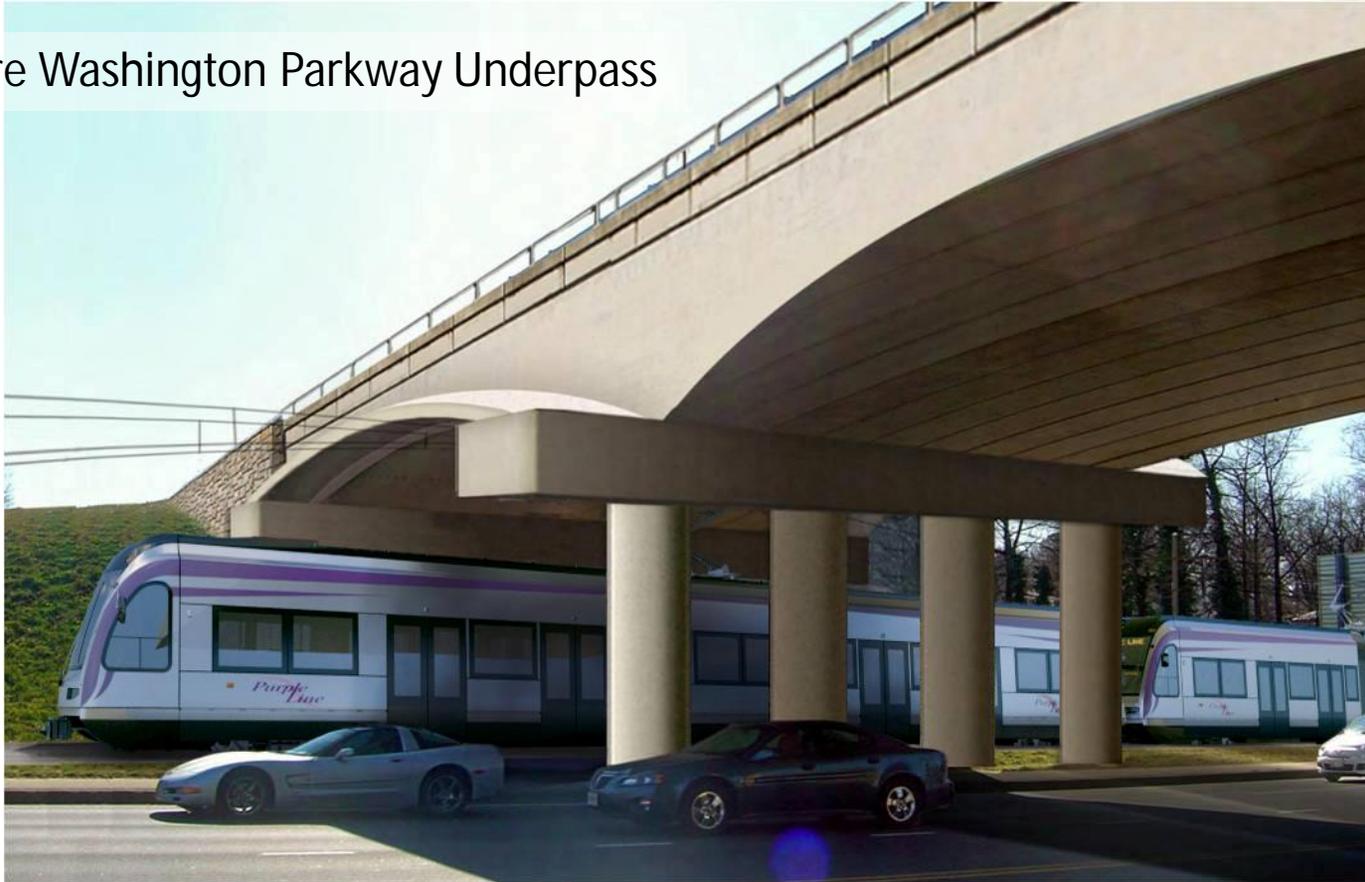


Riverdale Park Station – looking southeast





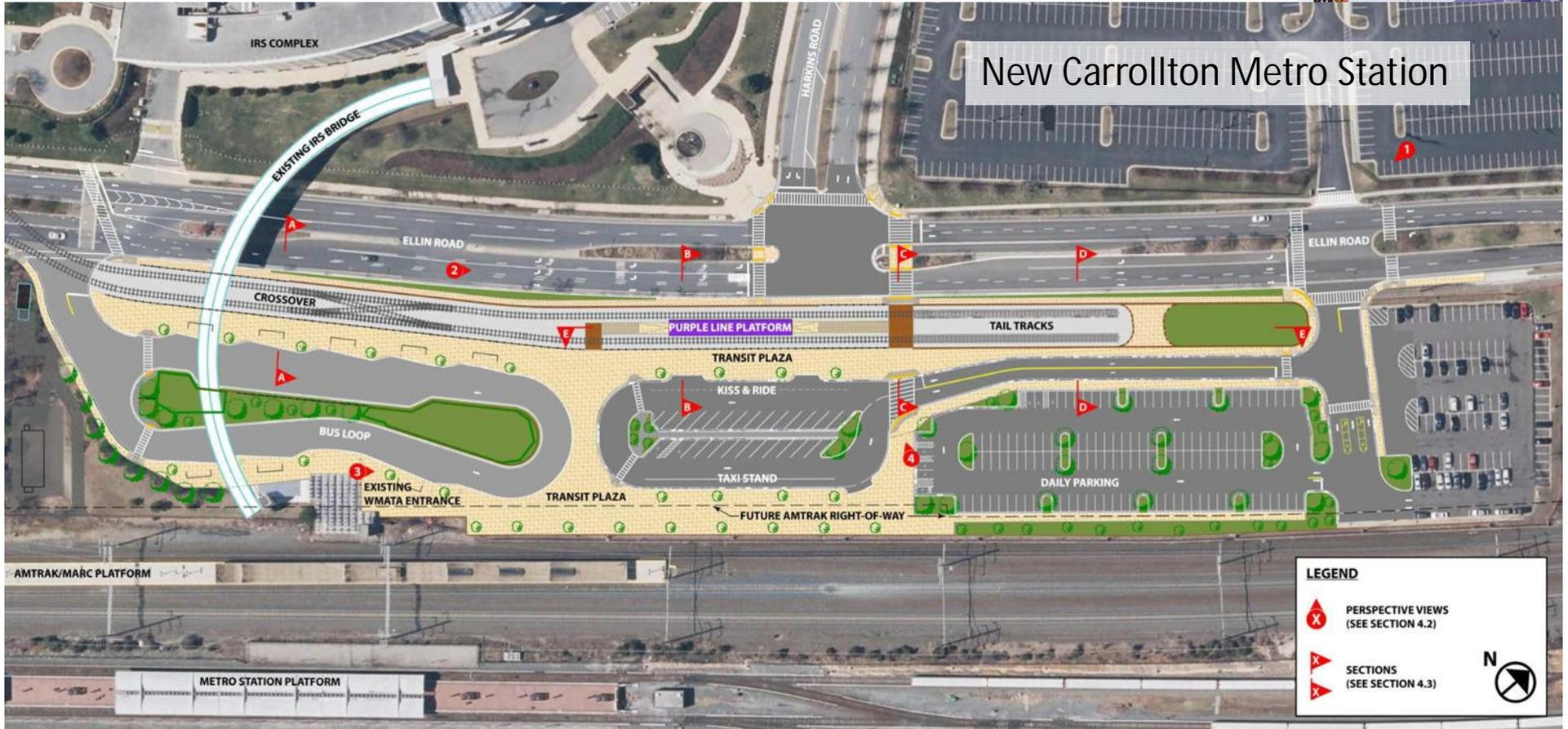
Baltimore Washington Parkway Underpass



- Avoidance of construction impacts at Baltimore Washington Parkway by boring under the roadway



New Carrollton Metro Station

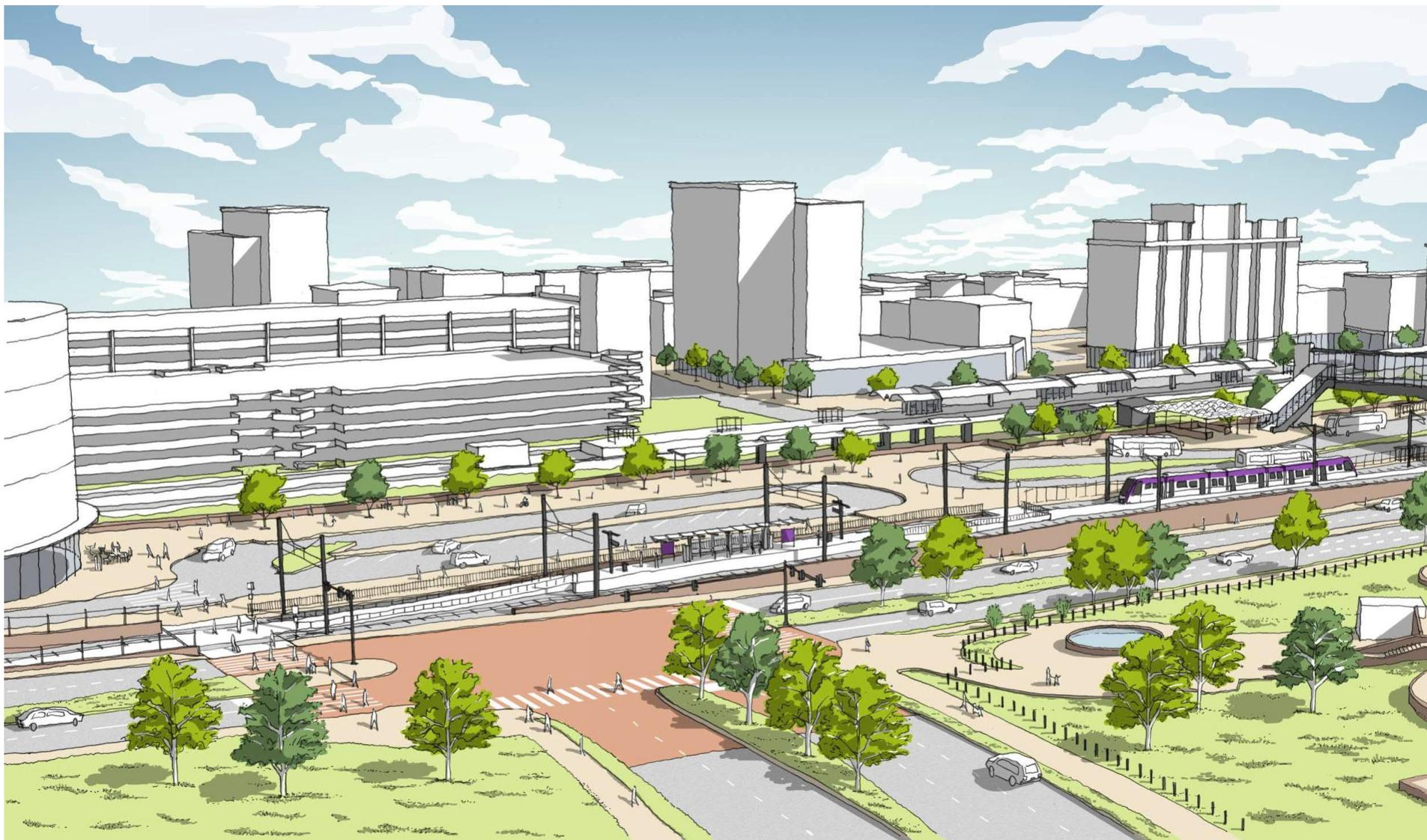


- Relocates Purple Line station to Ellin Road
- Enhances the street and better accommodates future development
- Reduces the number of lost parking spaces by up to 80%

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New Carrollton Metro Station





Next Steps

- Remedy Litigation on the ROD
- ROW Acquisition Continues
- Design and Pre-construction Activities Move Forward
- Commence Construction – TBA
- Begin Revenue Service – Spring 2022