



Purple Line Light Rail P3 Project

TPB Technical Meeting

May 6, 2016

Topics



- **Recap of Purple Line P3 History**
- **General Project Overview**
- **The P3 Contract**
- **Details on the Successful Proposal**

Actions Leading up to the Purple Line P3

- In 2011, MTA created the Office of Transit Development and Delivery (TDD) to advance the Purple Line
- In 2013, Maryland enacted a new P3 law with Purple Line in mind
 - ❑ Factors considered in MTA's P3 decision:
 1. Purple Line is self-contained and isolated from existing MTA operations
 2. Appropriate size for concessionaires to bid
 3. Enough complexity for innovation
 4. Reasonable risk allocation
 5. Potential value for money
- In November 2013, MTA initiated a P3 procurement for the Purple Line, shortlisting 4 of the 6 teams responding to the RFQ

Recap of Recent Purple Line P3 Events

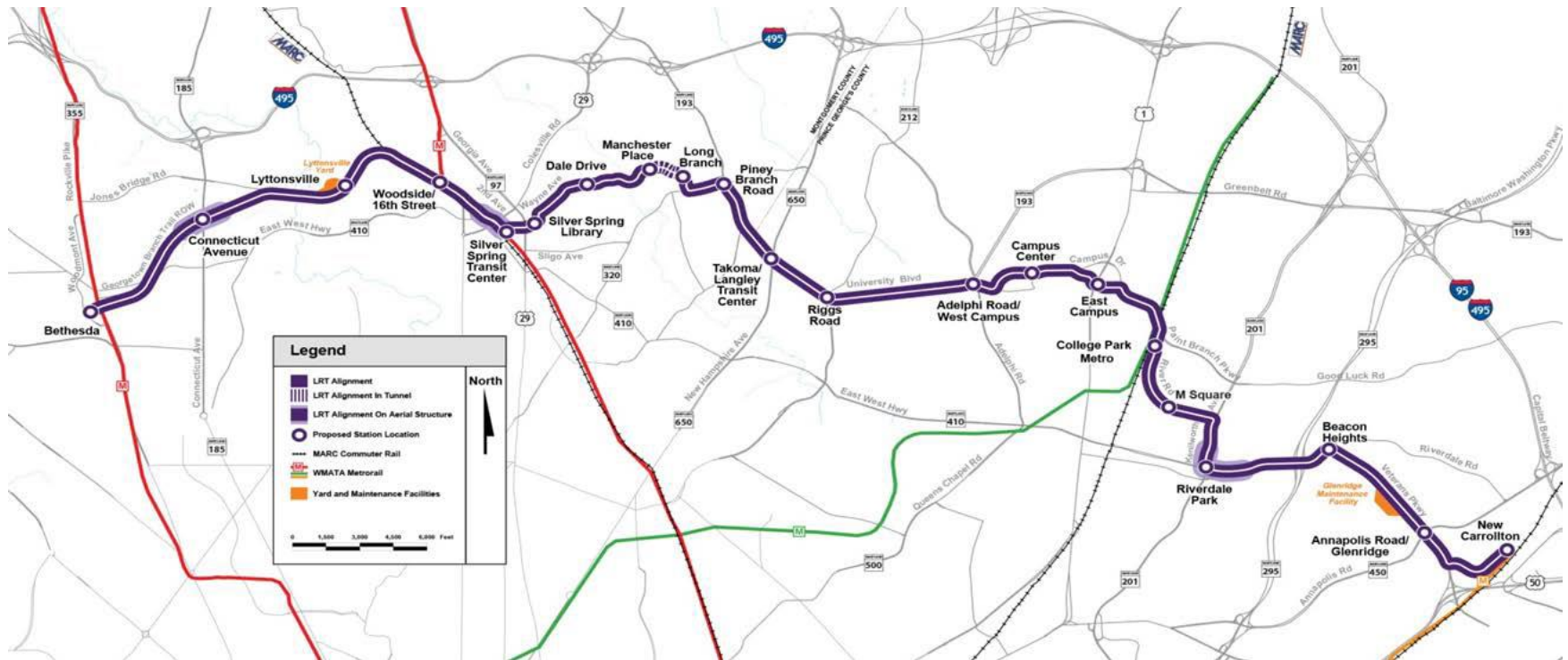
- December 8th
 - ❑ All four of the shortlisted bidding teams submitted P3 proposals
- January
 - ❑ MTA identified the best value proposal and entered into negotiations
- March 2nd
 - ❑ MTA successfully concluded negotiations
 - ❑ Governor Hogan announced Purple Line Transit Partners (PLTP) is the selected proposer
- April 6th
 - ❑ Maryland's Board of Public Works (BPW) approved the Purple Line P3 Contract
- April 7th
 - ❑ MTA and PLTP achieved Commercial Close
 - ❑ MTA issued a Limited Notice to Proceed on design work

Purple Line Light Rail P3 Project

GENERAL PROJECT OVERVIEW

Project Description

- 16.2 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



Connecting Maryland's Transit Systems

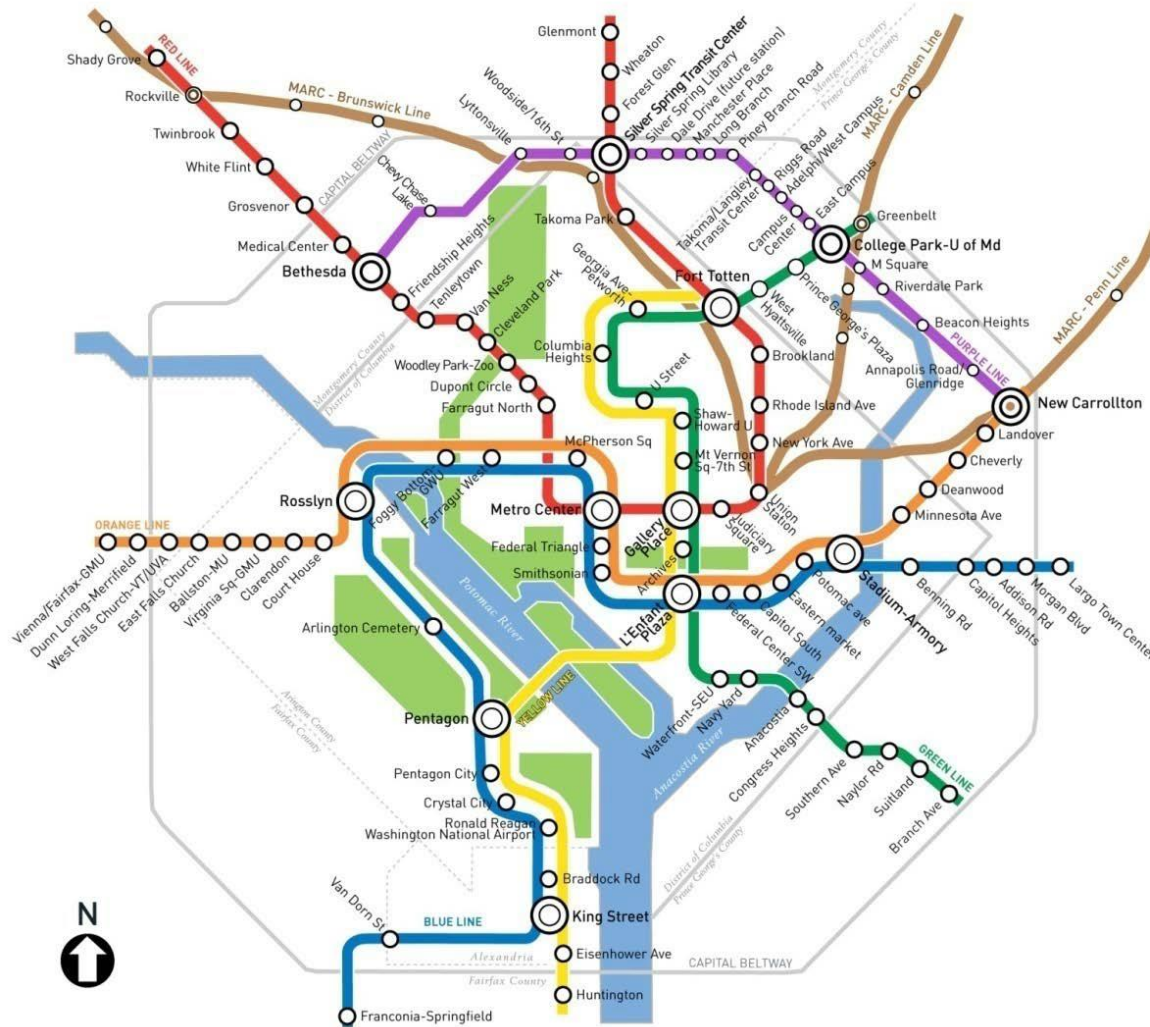
Links with Metro at:

- 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.

Links up with regional and local bus services.



Project Characteristics

- 59,500 daily riders in 2022 when the Purple Line is up and running for passenger service and more than 74,000 daily riders in 2040.
- Hours of operation generally match Metrorail hours.
- Trains will arrive every 7.5 minutes during peak periods and 10-15 minutes off-peak.
- Approximately 30% of riders will use Metrorail or MARC for a portion of their trips.
- End-to-end travel time is just over an hour; majority of riders will take shorter trips.
- Primary Maintenance & Operations Center will be located in Prince Georges County about a mile from New Carrollton.

Project Benefits

- The project will generate more than 23,000 jobs during the 5 ½ year design and construction period.
- Disadvantaged Business Enterprise (DBE) project goals are 26% for design services and 22% for construction services.
- At least 33% of construction work will be performed by workers of social and economic disadvantage.
- The project will serve as a catalyst for economic development and revitalization of the communities along the corridor (Local developers, businesses, and prospective employees are already inquiring about the project).
- Typically for every dollar spent on public transit projects, \$6 dollars in local economic activity is also generated.
- The Purple Line will connect residents to jobs and attract private, federal, and state agency employment centers.

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P3 CONTRACT

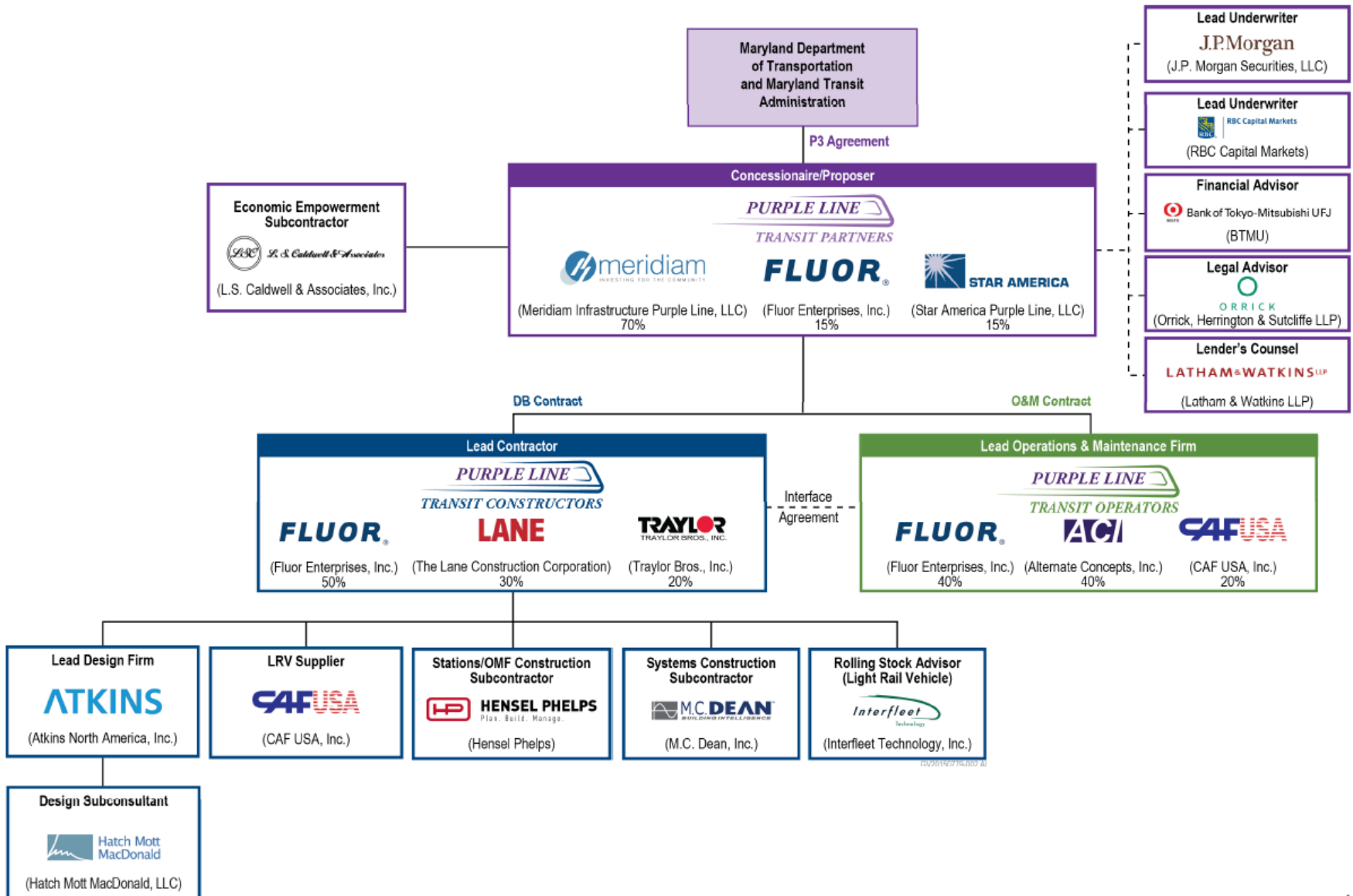
Purple Line P3 Basics

- **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

Who/What is a Concessionaire?

- Multiple companies combine into a consortium referred to as the “Concessionaire”
 - ❑ Investors
 - ❑ Design/Builder(s)
 - ❑ Operator/Maintainer(s)
 - ❑ Vehicle Supplier
- Concessionaire led by investors who are focused on optimizing its long-term performance, not on individual components of the project

Concessionaire: Purple Line Transit Partners



How Does the Concessionaire Get Paid?

- **Construction progress payments**
 - Payments made by the public agency for a portion of the project cost during design and construction
 - MTA will pay the concessionaire \$990 million of the \$1.99 billion construction cost
 - Concessionaire will finance the remaining \$1 billion
- **Availability Payments**
 - Monthly payments to the concessionaire once the project opens; based on the “availability” of the project at a certain level of performance
 - The concessionaire uses these funds to repay financing as well as fund ongoing operating, maintenance, insurance, and capital renewal costs over the 30 years

The P3 Contract Provides Strong Incentives and Accountability

- A few examples:
 - Availability Payments are a fixed price (tied to inflation)
 - Cost overruns are the concessionaire's risk
 - Vehicle or infrastructure failures are entirely the concessionaire's cost to fix
 - Concessionaire forfeits Availability Payments if it is late in opening the project for revenue service
 - Up to 100% of the monthly Availability Payment can be deducted for poor operating performance*
 - Largest factor is on-time performance of trains
 - Deductions also possible for other issues (e.g., \$40K deduction if elevator availability is only 97%)
 - Contract can be terminated (resulting in equity and debt lender losses) if there is sustained poor performance

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THE SUCCESSFUL PROPOSAL

PLTP – World Class Team With Strong P3 Experience

- Long term investor who:
 - Intends to stay invested over entire life of the contract.
 - Embraces the Owner's goals and objectives of safety and performance.
- Relevant projects include:
 - I-495/I-95 Express Lanes P3 in Virginia (Fluor/Lane)
 - Eagle P3 Commuter Rail project in Denver (Fluor/ACI)
- Safety culture:
 - Key PLTP firms all have accident rates below industry averages.
 - Proposed community and passenger safety program exceeds minimum requirements.
- 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, such as:
 - ❑ Use of jet fans to avoid constructing a ventilation tower in Bethesda's Woodmont Plaza.
 - ❑ Use of solar powered lubricators to reduce wheel noise and vibration on tight curves.
 - ❑ Avoidance of construction impacts at the BW Parkway by boring under the road.
 - ❑ Offering a 1500 Volt power system to cut the number of traction power substations by nearly 50% and reduce the need to acquire property.

Innovative Ideas and a Strong Design Cont.

- ❑ Use of a flexible modular single car trains that provide the same capacity as a two car train at less cost.
- ❑ Investing more upfront in a grade separated rail crossing at Glenridge Plaza to avoid traffic impacts.
- ❑ Use of noise barriers during the construction of the Plymouth Tunnel to reduce impacts on the community.

CAF Light Rail Vehicle



Exterior Purple Line LRV Rendering (based on Houston LRV design)

General Characteristics of The Proposed LRV

- *Modern spacious design*
- *80% low floor*
- *Service-proven design*
- *Bi-directional operability*
- *80 seats (including 40 flip-downs)*
- *Open floor design in low floor area*
- *1500 V supply to reduce system energy consumption*
- *Modular and easier to maintain*

Light Rail Vehicle Interior



Interior Rendering 1



Interior Rendering 2



Interior Rendering 3



Interior Rendering 4

Light Rail Vehicle Interior (Cont.)



Silver Spring Transit Center ATC



Silver Spring Library Station



Glenridge Operations and Maintenance Facility

- Serves as the primary Operations and Maintenance (OMF) facility for the Purple Line
 - ❑ Includes the Operations Control Center (OCC)
- LEED Silver facility



Lyttonsville Backup Operations Facility

- The site provides space for additional operations and a backup control center.



Next Steps

- ❑ Financial Close – June 2, 2016
- ❑ FTA Full Funding Grant Agreement – Summer 2016
- ❑ Commence Construction – Late 2016
- ❑ Begin Revenue Service – Spring 2022